

SIMMONS'
MANUAL TRAINING
BLUE BOOK

SIMMONS HARDWARE CO.

(INCORPORATED)

ST. LOUIS

Manufacturers and
Distributors

NEW YORK



COMPLIMENTS OF

SIMMONS HARDWARE CO.

Exclusively Wholesale.

NEW YORK

To

Mr. Wm. M. Edmonstone,
Milford High School,
Milford, N. H.

No.

3668

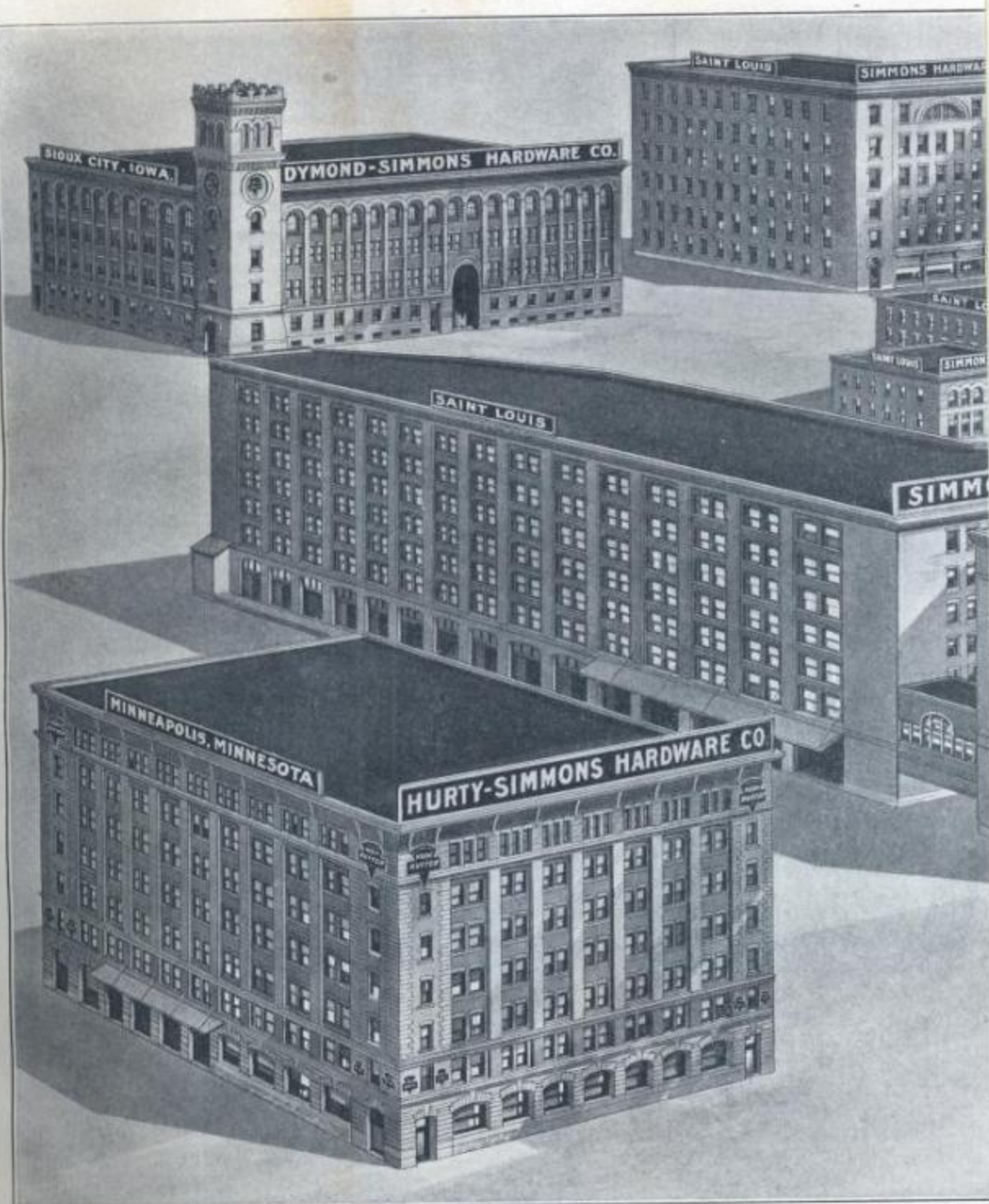
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Space Occupied by	
SIMMONS HARDWARE CO., St. Louis.....	1,000,000 Square Feet
HURTY-SIMMONS HDW. CO., Minneapolis, Minn.....	150,000 Square Feet
DYMond-SIMMONS HDW. CO., Sioux City, Iowa.....	150,485 Square Feet
THE STANDARDT-SIMMONS HDW. CO., Toledo, Ohio.....	92,328 Square Feet
THE MORTON-SIMMONS HDW. CO., Wichita, Kans.....	108,580 Square Feet
SIMMONS HARDWARE CO., New York City.....	26,544 Square Feet
Grand Total	1,528,237 Square Feet

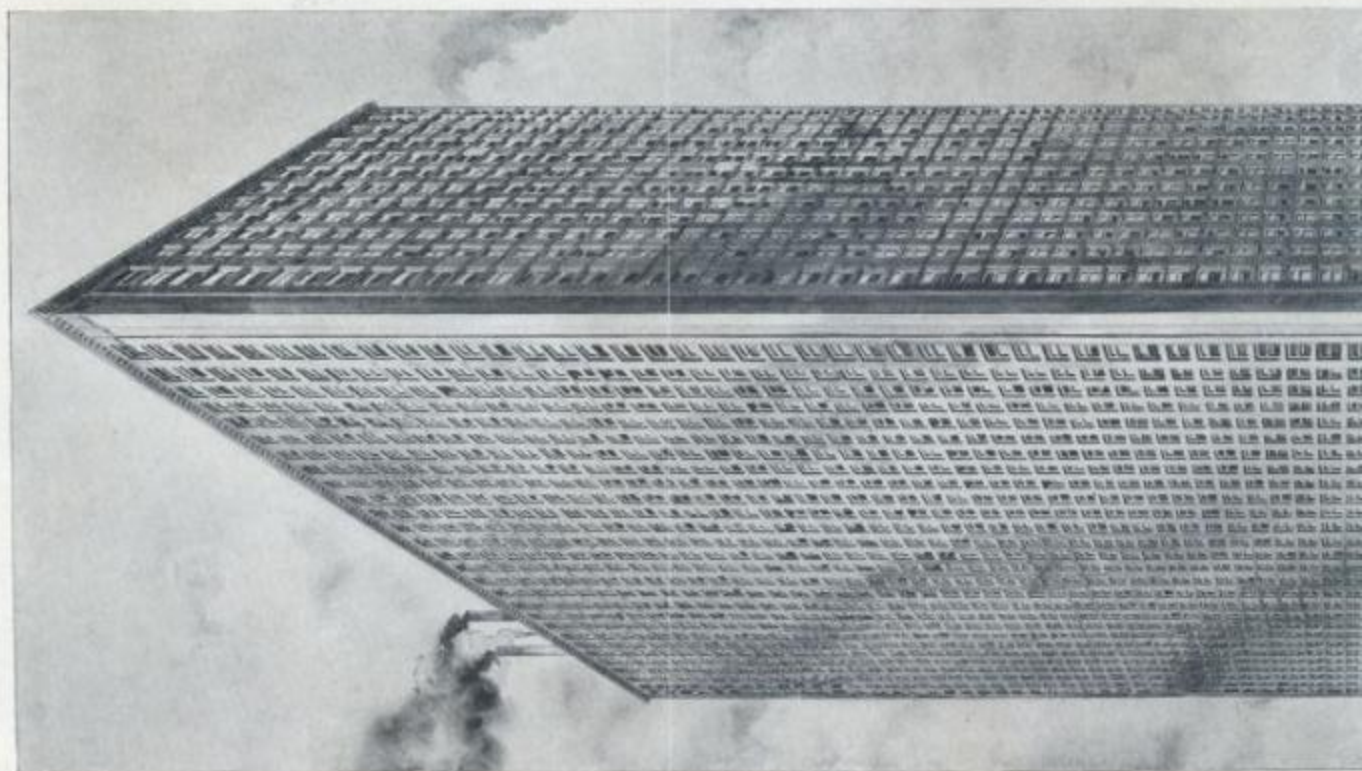
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The above illustration shows the buildings and warehouses occupied by the Simmons Companies in St. Louis, Minneapolis, Sioux City, Wichita, New York and Toledo. These houses have a complete working force and supply goods to customers in their respective territories.

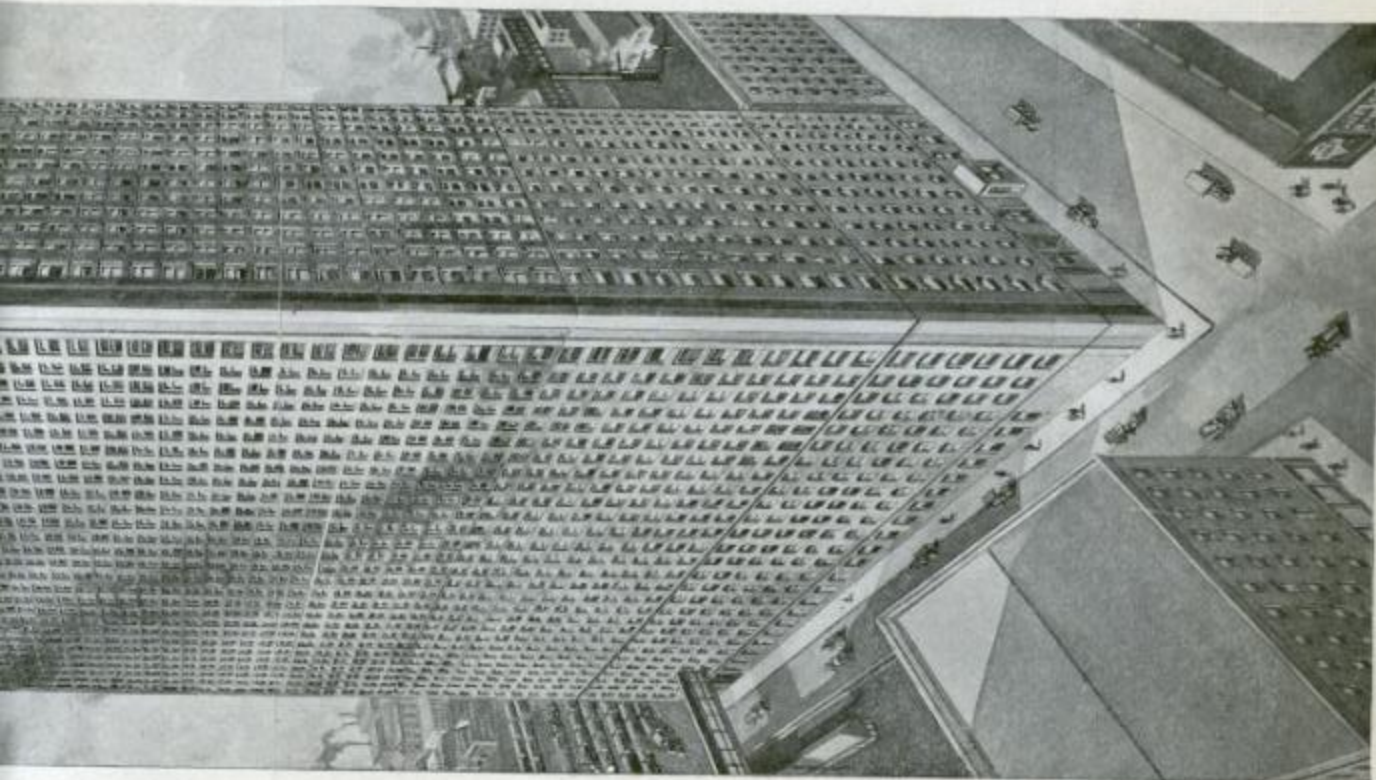
This system of local houses and distributing points gives the Retail Hardware Merchant the best and quickest service, and affords him many other advantages not within reach of any other similar concern in the world.

Acres.
Acres.
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Acres.
Acres.



SEVENTY STORIES

If the total floor space of all the Simmons Buildings were combined in one and erected (size of lot, 100x225 feet), St. Louis, it would make a bu



NTY STORIES HIGH.

ed in one and erected on the foundation of the home office, 9th and Spruce Streets
t would make a building SEVEN HUNDRED FEET HIGH.

PREFACE



FOR the use of the thinking men, who know what they want and always want the best, we have prepared this catalogue, to illustrate and describe the Tools used in the several departments of Manual Training in the schools. Particular attention is called to the fact that practically speaking everything in the book bears the **KEEN KUTTER** Trade Mark.

The Artisan who loves his work, would hardly be satisfied in buying a set of Chisels or Auger Bits to have the $\frac{3}{8}$ inch of one make, the $\frac{1}{2}$ inch of another and the $\frac{3}{4}$ inch of another; if this is true—and it would seem reasonable to believe it so—should it be applied to all of the tools of the Kit, Hammers, Saws, Hatchets, Chisels, etc., having in mind that under the **KEEN KUTTER** Trade Mark they represent in their various classes the best that money and brains can produce, and as such we commend them to your consideration without reserve.

The **KEEN KUTTER** Tools and Cutlery have been sold for over 40 years under this mark and motto:

"The Recollection of **QUALITY** remains long after the **PRICE** is forgotten."—E. C. SIMMONS.

Sincerely yours,

SIMMONS HARDWARE CO.

(INCORPORATED.)

ST. LOUIS and NEW YORK.

"THE RECOLLECTION OF *QUALITY* REMAINS LONG AFTER THE *PRICE* IS FORGOTTEN"—E.C. SIMMONS
TRADE MARK REGISTERED.



Edward C. Simmons

ORIGINATOR OF
THE BRAND
E. C. SIMMONS
KEEN KUTTER

FOUNDER OF THE
SIMMONS
HARDWARE
COMPANY



SYSTEM OF NUMBERING.

To simplify the numbering of all goods in this catalog and make it easy for our customers to write up Mail Orders accurately and with a minimum amount of writing, we beg to call attention to the fact that the only numbers and description necessary in specifying goods in this catalog, to enable us to fill orders accurately, are the figures and words which are Underscored with a heavy black line.

As an instance of this, we refer you to page 2 and the first item in the catalog; it is not necessary to specify an order thus:

"1 doz. KEEN KUTTER Yankee Pattern Plain Bronzed Axes, handled with KEEN KUTTER Handle No. KX36, 3½ to 4½ lbs."

In order to do away with long and laborious descriptions, we have made the number 100E cover all of the above specifications, and all that is necessary in writing up an order for one dozen of these Axes is as follows:

"1 doz. Axes, No. 100E, 3½ to 4½ lbs."

The only information that it is necessary to give us in addition to the quantity, the item and the under-scored number and description, is in cases where the items called for are made in different weights, sizes, lengths, etc., as in the above Axes, where it is necessary to specify the assortment of weights wanted.

This will tell us just as completely what is desired as if the entire description as outlined in the first illustration above were used: In fact, it will answer our purpose better because in filling orders we specify everything by numbers and not by description. This is true of all goods in the catalog.

This system of numbers is utilized throughout the entire catalog, and if when ordering goods you will only give the numbers and description under which the heavy black line appears, you will need to go to no farther trouble as to description, and it will greatly facilitate our handling of your orders and inquiries, and will enable us to do so in a most intelligent and satisfactory manner.

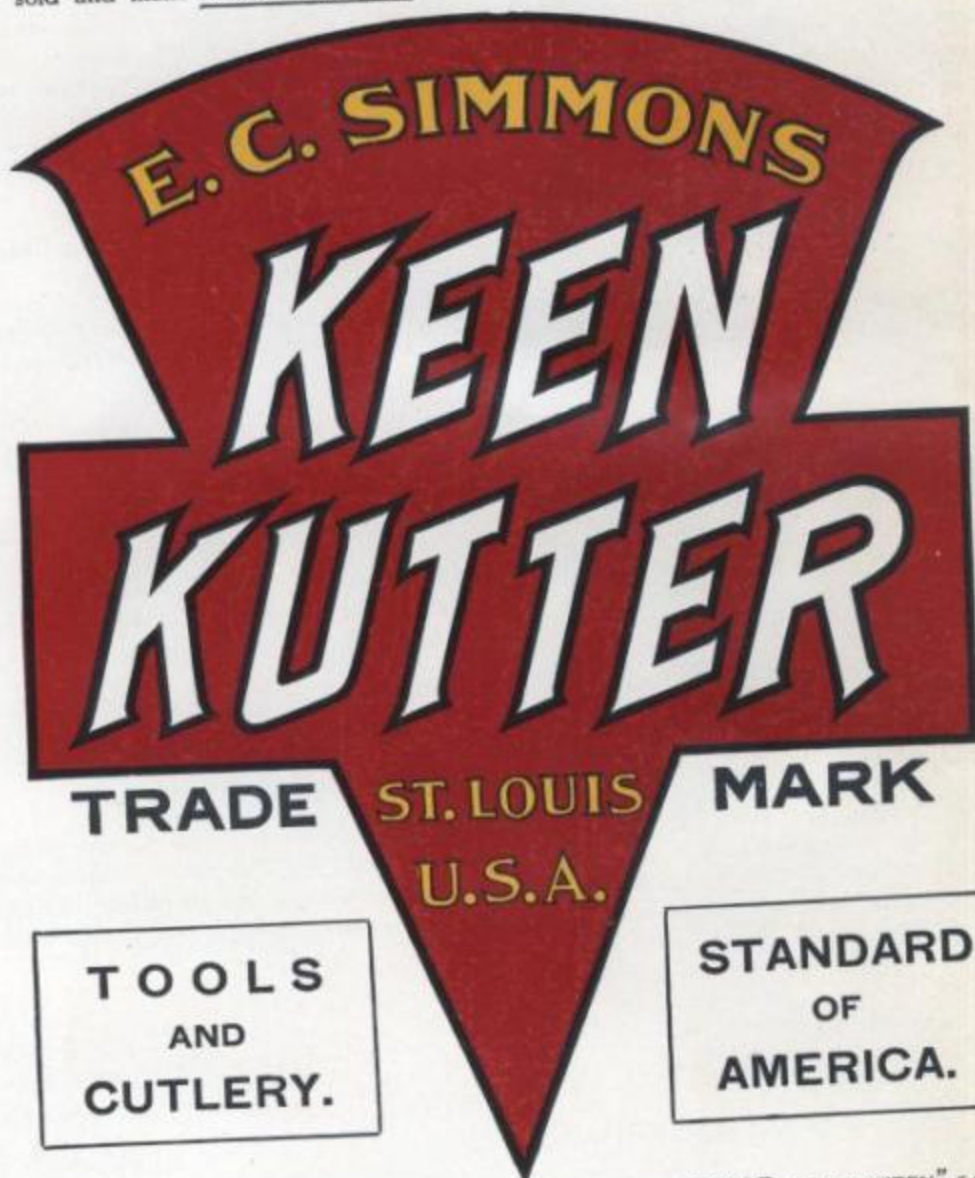
It has taken weeks of careful, thorough and pains-taking effort to incorporate in this catalog a system of numbers which will make it easy for our customers to use, will afford them a saving of time and labor, and will enable us to handle their orders in a quick and most satisfactory manner, and we believe that after they have, to a certain extent, familiarized themselves with our system of numbers, they will be very much pleased with the result of our efforts.

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TOOL "INSURANCE."

With every Tool or piece of Cutlery in the **KEEN KUTTER** line we sell to a Merchant, is included "TOOL INSURANCE." In other words, the **KEEN KUTTER** Trade Mark on any tool or piece of cutlery means not only that it is the best we are able to turn out, and that it has undergone the strictest inspection, but that in the event of any possible flaw or dissatisfaction on the part of the user, it is "insured" by the Simmons Hardware Company on our liberal guarantee.

That's why merchants can afford to recommend **KEEN KUTTER** Tools and Cutlery so highly. They stay sold and make satisfied customers.



"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN"—E.C. SIMMONS
TRADE MARK REGISTERED.



"The RECOLLECTION of QUALITY Remains Long After the PRICE is Forgotten."—E. C. SIMMONS.
TRADE MARK REGISTERED.

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The Mark



—AND—

The Motto

"The Recollection of QUALITY
Remains long after the PRICE
is forgotten."

E. C. Simmons

TRADE MARK REGISTERED

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KEEN KUTTER TOOLS



HAVE CARVED THEIR
WAY THROUGH ALL
COMPETITION AND
LEAD THE WORLD.

"The Recollection of QUALITY Remains long after the PRICE is Forgotten."—E. C. SIMMONS.
Trade Mark Registered.



TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

AXES.

SINGLE BIT.

The name "**KEEN KUTTER**" the Wide World over stands for Quality, and the Universal Popularity of our "**KEEN KUTTER**" Axes proves them worthy of the name.



All our Handled Axes have Handles FASTENED WITH OUR GRELLNER PATENT WEDGE, which Will Positively Prevent the Head from Flying Off the Handle.

KEEN KUTTER*

Soft, Steel Body; Hardened Poll; Highest Grade Crucible Forged Steel Bit, HAND TEMPERED; GOLD BRONZED, WITH POLISHED HEAD AND BIT.



No. 101.

No. 100D.

Y
A
N
K
E
E

YANKEE (NARROW HEAD) PATTERN, PLAIN (for Illustration see Above).

	3½	4	4½
Weights, Unhandled, lbs.	65	71	76
Weight per Dozen, Handled, about, lbs.			
No. 100E—With KEEN KUTTER Handle No. KX36..... Per Dozen	\$18.50	18.75	19.00
No. 100D—With Champion Octagon Handle No. CH36..... Per Dozen	\$17.75	18.00	18.25
No. 100Q—With Cumberland Handle No. CXX..... Per Dozen	\$17.00	17.25	17.50
No. 100—WITHOUT HANDLE	\$12.50	12.75	13.00
	3 to 4	3½ to 4	3½ to 4½
Weights, Unhandled, Assorted, lbs.	65	67	70
Weight per Dozen, Handled, about, lbs.			
No. 100E—With KEEN KUTTER Handle No. KX36..... Per Dozen	\$18.50	18.75	18.75
No. 100D—With Champion Octagon Handle No. CH36..... Per Dozen	\$17.75	18.00	18.00
No. 100Q—With Cumberland Handle No. CXX..... Per Dozen	\$17.00	17.25	17.25
No. 100—WITHOUT HANDLE	\$12.50	12.75	12.75
	4 to 5	4½ to 5½	4½ to 6
Weights, Unhandled, Assorted, lbs.	75	80	83
Weight per Dozen, Handled, about, lbs.			
No. 100E—With KEEN KUTTER Handle No. KX36..... Per Dozen	\$19.00	19.25	19.25
No. 100D—With Champion Octagon Handle No. CH36..... Per Dozen	\$18.25	18.50	18.50
No. 100Q—With Cumberland Handle No. CXX..... Per Dozen	\$17.50	17.75	17.75
No. 100—WITHOUT HANDLE	\$13.00	13.25	13.25

DAYTON (WIDE HEAD) PATTERN, PLAIN (for Illustration see Above).

DAYTON (WIDE HEAD) PATTERN, PLAIN (for illustration see Above).

	3½	4	4½	Assorted 3 to 4	Assorted 3½ to 4½
Weights, Unhandled, lbs.	65	71	76	65	68
Weight per Dozen, Handled, about, lbs.					

<u>No. 101A</u> —With Nonpareil Octagon Handle No. NX36... Per Doz.	\$18.50	18.75	19.00	18.50	18.75
<u>No. 101S</u> —With Cumberland Handle No. CAA..... Per Doz.	\$17.75	18.00	18.25	17.75	18.00
<u>No. 101NN</u> —With Lone Star Octagon Handle No. LS... Per Doz.	\$17.50	17.75	18.00	17.50	17.75
<u>No. 101</u> —WITHOUT HANDLE Per Doz.	\$12.50	12.75	13.00	12.50	12.75
Weights, Unhandled, Assorted, lbs.	3½ to 4½	4 to 5	4½ to 5½	5 to 6	
Weight per Dozen, Handled, about, lbs.	70	75	80	84	

<u>No. 101A</u> —With Nonpareil Octagon Handle No. NX36... Per Doz.	\$18.75	19.00	19.25	19.50	
<u>No. 101S</u> —With Cumberland Handle No. CAA..... Per Doz.	\$18.00	18.25	18.50	18.75	
<u>No. 101NN</u> —With Lone Star Octagon Handle No. LS... Per Doz.	\$17.75	18.00	18.25	18.50	
<u>No. 101</u> —WITHOUT HANDLE Per Doz.	\$12.75	13.00	13.25	13.50	

DAYTON

Protecting. Wrapped in Paper and Burlapped.

D
A
Y
T
O
N

Handled Axes, One Dozen in a Crate, Heads Enclosed, Handles Projecting, Wrapped in Paper and Burlapped.

Unhandled Axes, One Dozen in a Wood Box.

For Approximate Shipping Weight of Unhandled Axes, Deduct 16 lbs. per Dozen from Weight of Same Axe Handled. Weight of Each Axe Stamped on the Poll.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

-6-
AXES.
SINGLE BIT.

All our Handled Axes have Handles FASTENED WITH OUR
GRELLNER PATENT WEDGE, which Will Positively Prevent the
Head from Flying Off the Handle.



No. 111/C.

KEEN KUTTER*

Soft Steel Body; Hardened Poll; Highest Grade Crucible Forged
Steel Bit, HAND TEMPERED.



No. 113.

**YANKEE (NARROW HEAD) PATTERN, HOLLOW BEVEL;
FULL POLISHED AND ETCHED.**

YANKEE
PATTERN

	Weights, Unhandled, Assorted, lbs.	3 to 4	3½ to 4½	4 to 5	4½ to 5½
	Weight per dozen, Handled, about, lbs.	65	70	75	80
No. 110A	—With Nonpareil Oct. Hdl. No. NX36, Per Doz.	\$24.25	24.50	24.75	25.00
No. 110E	—With KEEN KUTTER Handle No. KX36, Per Doz.	\$24.00	24.25	24.50	24.75
No. 110/S	—With Cumberland Handle No. CAA, Per Doz.	\$23.50	23.75	24.00	24.25
No. 110	—WITHOUT HANDLE	\$18.25	18.50	18.75	19.00

MICHIGAN PATTERN, HOLLOW BEVEL; FULL POLISHED AND ETCHED.
(for Illustration see Above).

	Weights, Unhandled, Assorted, lbs.	3 to 4	3½ to 4½	4 to 5
	Weight per dozen, Handled, about, lbs.	65	70	75
No. 111C	—With Wyoming Oval Handle No. WR36, Per Dozen	\$23.75	24.00	24.25
No. 111CC	—With Minnesota Chief Handle No. MC4X, Per Dozen	\$23.50	23.75	24.00
No. 111T	—With Cumberland Handle No. CA, Per Dozen	\$23.75	23.00	23.25
No. 111	—WITHOUT HANDLE	\$18.25	18.50	18.75

Handled Axes, One Dozen in a Crate; Unhandled Axes, One-twelfth Dozen in a Carton, One Dozen in a Wood Box.

Nos. 110 and 111 **KEEN KUTTER** HOLLOW BEVELED AXES are for the Expert Chopper, built for rapidity and ease of cutting. The carefully ground bevels afford a quick clearance for the Axe, which will not bind in the cut; the grinding is extra keen and the temper hard, for use under most exacting conditions. These Axes are not recommended for ordinary use or for Amateurs, but are indispensable to an Expert Chopper who can appreciate an extra high class tool.

**DAYTON (WIDE HEAD) PATTERN, HOLLOW BEVEL; FULL POLISHED; BEVELS
PAINTED RED** (for Illustration see Above).

	Weights, Unhandled, Assorted, lbs.	3 to 4	3½ to 4½	4 to 5	4½ to 5½
	Weight per dozen, Handled, about, lbs.	65	70	75	80
No. 113D	—With Champion Octagon Handle No. CH36, Per Dozen	\$19.75	20.00	20.25	20.50
No. 113Q	—With Cumberland Handle No. CXX, Per Dozen	\$19.00	19.25	19.50	19.75
No. 113V	—With Blue Oak Handle No. A1R, Per Dozen	\$18.50	18.75	19.00	19.25
No. 113	—WITHOUT HANDLE	\$14.50	14.75	15.00	15.25

MICHIGAN PATTERN, HOLLOW BEVEL; FULL POLISHED; BEVELS PAINTED RED.

MICHIGAN
PATTERN

	Weights, Unhandled, Assorted, lbs.	3 to 4	3½ to 4½	4 to 5
	Weight per dozen, Handled, about, lbs.	65	70	75
No. 114C	—With Wyoming Oval Hdl., No. WR36, Per Doz.	\$20.00	20.25	20.50
No. 114/S	—With Cumberland Handle No. CAA, Per Doz.	\$19.75	20.00	20.25
No. 114EE	—With Minnesota Chief Handle No. MC2X, Per Doz.	\$18.00	18.25	18.50
No. 114	—WITHOUT HANDLE	\$14.50	14.75	15.00

Handled Axes, One Dozen in a Crate, Heads Enclosed, Handles Projecting, Wrapped in Paper and Burlapped.
Unhandled Axes, One Dozen in a Wood Box.

For Approximate Shipping Weight of Unhandled Axes, Deduct 16 lbs. per Dozen from Weight of Same Axe
Handled. Weight of Each Axe Stamped on the Poll.

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TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

AXES.**DOUBLE BIT.**

All our Handled Axes have Handles FASTENED WITH OUR GRELLNER PATENT WEDGE, which Will Positively Prevent the Head from Flying Off the Handle.



No. 150DA.

KEEN KUTTER®

Soft Steel Body; Highest Grade Crucible Forged Steel Bits,
HAND TEMPERED.



No. 151.

REGULAR OR WESTERN PATTERN; GOLD BRONZED,
WITH POLISHED BITS (for Illustration see Above).

	3 to 4	3½ to 4½	4 to 5
Weights, Unhandled, Assorted, lbs.....	65	70	75
Weight per dozen, Handled, about, lbs.....			
No. 150DA—With Nonparell DB Handle No. NDX36..... Per Dozen,	\$23.50	23.75	24.00
No. 150DN—With Wisconsin Handle No. DB4X..... Per Dozen,	\$22.75	23.00	23.25
No. 150DS—With Standard Excelsior DB Handle..... Per Dozen,	\$21.00	21.25	21.50
No. 150 —WITHOUT HANDLE	\$17.50	17.75	18.00

	4½ to 5½	4½ to 6
Weights, Unhandled, Assorted, lbs.....	80	83
Weight per dozen, Handled, about, lbs.....		
No. 150DA—With Nonparell DB Handle No. NDX36..... Per Dozen	\$24.25	24.25
No. 150DN—With Wisconsin Handle No. DB4X..... Per Dozen	\$23.50	23.50
No. 150DS—With Standard Excelsior DB Handle No. SDA..... Per Dozen	\$21.75	21.75
No. 150 —WITHOUT HANDLE	\$18.25	18.25

WISCONSIN PATTERN; GOLD BRONZED, WITH POLISHED BITS.

	3 to 4	3½ to 4½	4 to 5
Weights, Unhandled, Assorted, lbs.....	65	70	75
Weight per dozen, Handled, about, lbs.....			
No. 151DA—With Nonparell DB Handle No. NDX36..... Per Dozen	\$23.25	23.50	23.75
No. 151DK—With Blue Oak Handle No. A1RDB..... Per Dozen	\$21.75	22.00	22.25
No. 151DS—With Standard Excelsior DB Handle No. SDA..... Per Dozen	\$21.00	21.25	21.50
No. 151 —WITHOUT HANDLE	\$17.50	17.75	18.00

CALIFORNIA REVERSIBLE, OR HALF PEELING PATTERN; GOLD BRONZED, WITH POLISHED BITS.

	3½ to 4½	4 to 5
Weights, Unhandled, Assorted, lbs.....	70	75
Weight per dozen, Handled, about, lbs.....		
No. 152DA—With Nonparell DB Hdl., No. NDX36, Per Doz.....	\$23.50	23.75
No. 152DH—With Cumberland Handle No. CDA, Per Doz.....	\$23.25	22.50
No. 152DL—With Blue Oak Handle No. B2RDB, Per Doz.....	\$20.25	20.50
No. 152 —WITHOUT HANDLE	\$17.75	18.00

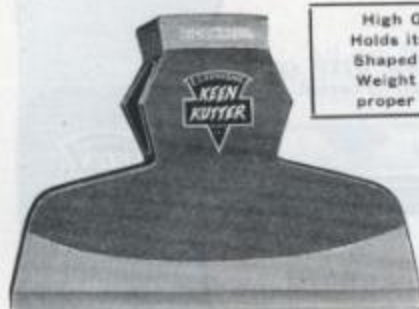


Handled Axes, One Dozen in a Crate, Heads Enclosed, Handles Projecting, Wrapped in Paper and Burlapped.
Unhandled Axes, One Dozen in a Wood Box.

For Approximate Shipping Weight of Unhandled Axes, Deduct 16 lbs. per Dozen from Weight of Same Axe Handled. Weight of Each Axe Stamped Near the Eye.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**
REGISTERED.

BROAD AXES.



Pittsburg Pattern.

High Grade.
Holds its Edge.
Shaped Right.
Weight in the
proper place.



Ramsey Pattern.



Canada Pattern.

KEEN KUTTER*

Soft Steel Body; Hardened Poll; Highest Grade Crucible Forged Steel Laid Bit, Hand Tempered and Tested; Gold Bronzed Body; Polished Head and Bit.

PITTSBURG PATTERN.

Nos.	KP67	KP78
Weights in a Box, Assorted, lbs.	6 to 7	7 to 8
Width of Cutting Edge, inches	11 to 12	12 to 13
Weight per dozen about, lbs.	90	102
Per dozen	\$32.00	35.00

RAMSEY PATTERN.

Nos.	KR78
Weights in a Box, Assorted, lbs.	7 to 8
Width of Cutting Edge, inches	11½ to 12½
Weight per dozen about, lbs.	102
Per dozen	\$46.00

CANADA PATTERN.

Nos.	KC/67	KC/78	KC/89
Weights in a Box, Assorted, lbs.	6 to 7	7 to 8	8 to 9
Width of Cutting Edge, inches	10½ to 11½	11½ to 12½	12½ to 13½
Weight per dozen about, lbs.	90	102	114
Per dozen	\$44.00	46.00	48.00

One-half Dozen in a Wood Box.

FIREMEN'S AXES.



Soft Steel Body; Forged Polished Bit and Pick Point, Carefully Tempered; Handled with 36 inch Oval Hickory Handle; Fastened with GRELLNER PATENT WEDGE.

Per Dozen

No. KFG—**KEEN KUTTER*** Highest Grade Crucible Steel Bit; Gold Bronzed Body; Weight each 6 lbs.; with Extra Quality Handle; Length of Head 13 inches; Length of Point 3½ inches; Width of Cut 5¼ inches; Weight per dozen about 115 lbs. \$36.00
One Dozen in a Crate.

SHIP AXES.



Soft Steel Body; Highest Grade Crucible Forged Steel Polished Bit, Carefully Tempered; Hardened Poll; Gold Bronzed Body, with Polished Head; Not Handled.

Per Dozen

No. KKS—**KEEN KUTTER***; Assorted 5 to 6 lbs.; Length, Poll to Bit, Assorted, 10 to 11 inches; Width of Cut, Assorted, 6 to 6½ inches; Weight per dozen about 75 lbs. \$30.00
One-half Dozen in a Wood Box.

MT

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.



ADZES.

KEEN KUTTER®



Edges are
Specially Ground
to a
Keen Edge.



Soft Steel Body; Highest Grade Crucible Forged Steel Bit, Extra Tempered; Steel Faced Head; Gold Bronzed Body; Polished Head and Bit; Solid Punched Eye.

HOUSE CARPENTERS', HALF HEAD.

Nos.	KC/3½	KC/4	KC/4½
Width of Cut, inches.....	3½	4	4½
Length, inches.....	9	9	9
Weight per dozen about, lbs....	48	50	53
Per dozen.....	\$30.00	30.00	30.00

One-half Dozen in a Wood Box.

RAILROAD, FLAT HEAD.

No.	KR5
Width of Cut, inches.....	5
Length, inches.....	9
Weight per dozen about, lbs.....	60
Per dozen.....	\$32.00

One Dozen in a Wood Box.



Every KEEN KUTTER ADZE
is carefully inspected
and tested before
leaving the Factory.



SHIP CARPENTER'S, SPUR HEAD.

Soft Steel Body; Highest Grade Crucible Forged Steel Bit, Extra Tempered; Gold Bronzed Spur Head and Body; Polished Bit; Solid Punched Eye. Specially Ground to a Keen Edge.

PLAIN BIT.

Nos.	KPS/4	KPS/4½
Width of Cut, inches.....	4	4½
Length, inches.....	11	11
Weight per dozen about, lbs.....	42	44
Per dozen.....	\$36.00	36.00

One-half Dozen in a Wood Box.

LIPPED BIT.

No.	KLS/4½
Width of Cut, inches.....	4½
Length, inches.....	11
Weight per dozen about, lbs.....	36
Per dozen.....	\$39.00

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

HATCHETS.

Highest Polished Nickel Plating.
Most Beautifully Finished Goods of
their Kind ever produced.



KEEN KUTTER*—NICKEL PLATED.

Highest Grade CRUCIBLE STEEL SOLID FORGED BODY and Bit; Hardened Poll; Extra Tempered; Sharp-
ened Ready for Use; FULL NICKEL PLATED AND ETCHED. Select KEEN KUTTER Grade Hickory Handle, FAST-
ENED WITH OUR GRELLNER PATENT WEDGE.



SHINGLING.
Special Pattern, Adze Eye,
Round Slim Neck,
Square Check-
ered Poll.

No. K501

Width of Cut, inches	3 1/2
Length over all, inches	13
Weight per dozen about, lbs.	19
Per dozen	\$17.00



HALF.
Haines Pattern, Adze
Eye, Round Neck,
Bell Poll.

Nos. K301 K302

Width of Cut, inches	3	3 1/4
Length over all, inches	12	13
Weight per dozen about, lbs.	18	20
Per dozen	\$16.50	17.00



LATHING.
Haines Pattern, Adze Eye, Round
Neck, Bell Poll, Checkered
Face, Nine Scores.

No. K401

Width of Cut, inches	2 1/16
Length over all, inches	13
Weight each, without Handles, ozs.	19
Weight per dozen about, lbs.	20
Per dozen	\$17.00



SHINGLING.
Haines Pattern, Adze Eye,
Round Neck, Bell
Poll.

Nos. K201 K202

Width of cut, inches	3 1/4	3 1/2
Length over all, inches	12	13
Weight per dozen about, lbs.	19	21
Per dozen	\$16.50	17.00



LATHING.
Underhill Pattern, Plain Eye,
Square Head, Checkered
Face.

Nos. K415 K420 K425

Width of Cut, inches	2	2 1/16	2 1/8
No. of Scores	8	9	10
Length over all, inches	12 1/2	12 1/2	12 1/2
Weight each, without Handle, ozs.	13	15	16
Weight per dozen about, lbs.	17	19	20
Per dozen	\$18.00	18.50	19.00



LATHING.
Philadelphia Pattern, Plain Eye,
Square Head, Checkered
Face, Seven Scores.

No. K410

Width of Cut, inches	2 1/4
Length over all, inches	12
Weight each, without Handle, ozs.	10
Weight per dozen about, lbs.	15
Per dozen	\$14.00

One-half Dozen in a Cardboard Box; Six Dozen in a Case.

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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

HATCHETS.

KEEN KUTTER®—NICKEL PLATED.

SOFT STEEL BODY; Solid Punched Box Eye; Highest Grade Crucible Forged Steel Bit, Extra Tempered; Sharpened Ready for Use; Steel Faced Poll; FULL NICKEL PLATED AND ETCHED; Select KEEN KUTTER Grade Hickory Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.



No. KNS/1.
Plain
Neck and
Poll.



No. KNO/1.
Octagon
Neck and
Poll.



No. KNH/1.
Plain
Neck and
Poll.



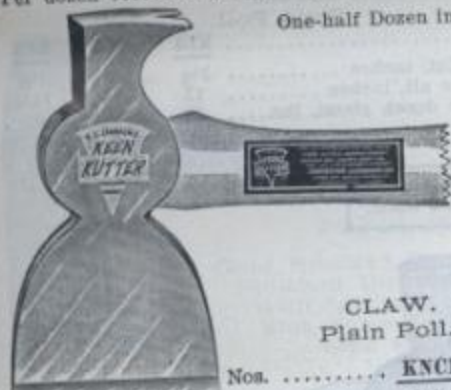
No. KNH/1.
Octagon
Neck and
Poll.
HALF.

SHINGLING.

Nos.	KNS/1	KNS/2	KNO/1	KNO/2
Neck and Poll	Plain	Plain	Octagon	Octagon
Width of Cut, in.	3 1/2	4	3 1/2	4
Length over all, in.	13	14	13	14
Weight per dozen about, lbs.	25	29	25	29
Per dozen	\$12.50	13.00	14.50	15.00

Nos.	KNH1	KNH2	KNH/1	KNH/2
Neck and Poll	Plain	Plain	Octagon	Octagon
Width of Cut, in.	3 1/2	3 1/2	3 1/2	3 1/2
Length over all, in.	13	14	13	13 1/2
Weight per dozen about, lbs.	24	28	24	28
Per dozen	\$13.00	13.50	15.00	15.50

One-half Dozen in a Cardboard Box; Six Dozen in a Case.



CLAW.
Plain Poll.

Nos.	KNC1	KNC2
Width of Cut, inches.	3 1/2	4
Length over all, inches.	12	14
Weight per dozen about, lbs.	22	26
Per dozen	\$13.50	14.00

One-half Dozen in a Wood Box;
Six Dozen in a Case.

BROAD OR BENCH.
Single Bevel.

Nos.	KNB2	KNB3	KNB4
Width of Cut, inches.	4 1/2	5	5 1/2
Length over all, inches.	15 1/2	16 1/2	17 1/2
Weight per doz. about, lbs.	27	33	37
Per dozen	\$17.50	20.00	21.50

One-half Dozen in a Wood Box; Three Dozen in a Case.



California Pattern, Square Head, Checkered Face, 14 Scores, Slightly Crowning Face.

Highest Grade CRUCIBLE STEEL SOLID FORGED BODY and Bit; Hardened Poll; Extra Tempered; FULL NICKEL PLATED AND ETCHED. Select "Nonpareil" Grade Hickory Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.

No.	KCB0	Per Dozen
Width of Cut 2 1/16 inches; Length over all 12 inches; Weight per dozen about 15 lbs.		\$18.00

One-half Dozen in a Cardboard Box; Six Dozen in a Case.



TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**
REGISTERED.

HATCHETS.

KEEN KUTTER®—BRONZED.

Soft Steel Body; Solid Punched Box Eye; Highest Grade Crucible Forged Steel Bit, Extra Tempered, Sharpened Ready for Use; Steel Faced Poll; **GOLD BRONZED BODY; EXTRA POLISHED HEAD AND BIT;** Select **KEEN KUTTER** Grade Hickory Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.



SHINGLING.
Plain Poll.

Nos.	KS/0	KS/1	KS/2	KS/3
Width of Cut, inches.....	3 1/4	3 1/2	4	4 1/2
Length over all, inches....	12	13	14	14 1/2
Wgt. per dozen about, lbs...	20	22	25	30
Per dozen	\$8.75	9.25	9.75	10.25



CLAW.
Plain Poll.

No.	KC1	KC2	KC3
Width of Cut, inches	3 1/2	4	4 1/2
Length over all, inches	13	14	14 1/2
Weight per dozen about, lbs....	28	28	30
Per dozen	\$10.25	10.75	11.25

KEEN KUTTER Hatchets are Guaranteed to be of Superior Selection and Quality, and Lead the World.



HALF.
Plain Poll.

Nos.	KH1	KH2	KH3
Width of Cut, inches.....	3 1/4	3 3/4	4
Length over all, inches.....	12 1/4	13 1/4	14 1/4
Weight per dozen about, lbs....	20	23	30
Per dozen	\$9.75	10.25	10.75



LATHING.
Checkered Face.

Nos.	KL1	KL2
Width of Cut, inches	2 1/4	2 1/2
Length over all, inches	12	13
Weight per dozen about, lbs....	18	22
Per dozen	\$9.25	9.75

One-half Dozen in a Cardboard Box; Two Dozen in a Case.

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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

HATCHETS.

KEEN KUTTER®

Soft Steel Body; Solid Punched Box Eye; Highest Grade Crucible Forged Steel Bit,
Extra Tempered; Sharpened Ready for Use; Steel Faced Poll; Select KEEN KUTTER
Grade Hickory Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.



BROAD OR BENCH.
SINGLE BEVEL, Gold Bronzed Body, Extra
Polished Head and Bit.

Nos.	KB1	KB2	KB3
Width of Cut, inches	4	4½	5
Length over all, inches	14	14½	15
Weight per dozen about, lbs.	23	26	30
Per dozen	\$10.50	11.50	13.00
Nos.	KB4	KB5	KB6
Width of Cut, inches	5½	6	6½
Length over all, inches	15½	16½	17½
Weight per dozen about, lbs.	36	42	49
Per dozen	\$14.50	16.50	18.00

BROAD OR BENCH.

DOUBLE BEVEL, Gold Bronzed Body, Extra Polished Head and Bit.

Nos.	KDB2	KDB3	KDB4
Width of Cut, inches	4¾	5¾	5¾
Length over all, inches	14¾	15	15½
Weight per dozen about, lbs.	26	36	40
Per dozen	\$13.00	15.00	16.50

One-half Dozen in a Cardboard Box; Three Dozen in a Case.



PRODUCE.

Gold Bronzed Body, Extra
Polished Bit and Head,
with Special Top Nail
Slot, Square Check-
ered Face.

No.	KGP10
Width of Cut, inches	2
Length over all, inches	11½
Weight per dozen about, lbs.	14
Per dozen	\$9.00

One-half Dozen in a Cardboard Box; KGP10 Two Dozen; KT2 Six Dozen in a Case.



TOBACCO.

Full Polished and Etched;
Checkered Poll.

No.	KT2
Width of Cut, inches	3½
Length over all, inches	15
Weight per dozen about, lbs.	31
Per dozen	\$12.50



HUNTERS'.



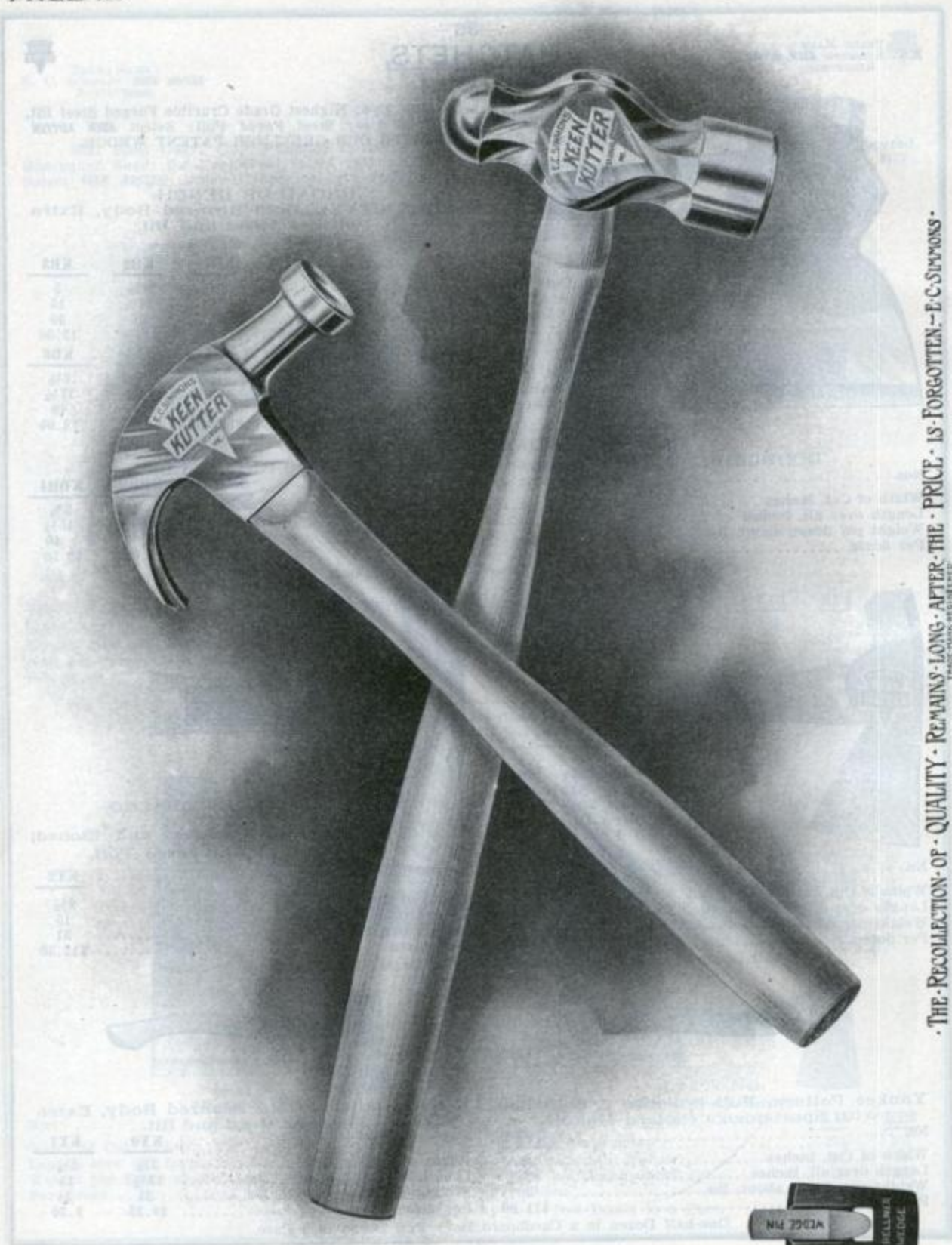
Yankee Pattern, Full Polished and Etched,
with Sportsmen's Pattern Handle.

No.	KP2/0
Width of Cut, inches	2¾
Length over all, inches	13½
Weight per dozen about, lbs.	20
Per dozen	\$11.00

One-half Dozen in a Cardboard Box; Two Dozen in a Case.

Yankee Pattern, Gold Bronzed Body, Extra
Polished Head and Bit.

Nos.	KY0	KY1
Width of Cut, inches	3¼	3¼
Length over all, inches	13½	15
Weight per dozen about, lbs.	21	24
Per dozen	\$9.25	9.50



• THE RECOLLECTION OF • QUALITY • REMAINS LONG AFTER THE • PRICE • IS FORGOTTEN • - E.C. SIMMONS -

For Description, see Pages 13 and 14.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

HANDLED HAMMERS.

KEEN KUTTER®

Drop Forged from one Solid Piece of Highest Grade Crucible Steel; Hardened Face; Tempered Claws; Thoroughly Tested; Bastard Cut Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.

On all **KEEN KUTTER®** Hammers we insist upon Severe and Carefully Measured Tests, which demonstrate and enable us to Guarantee the proper hardness of the Striking Faces; the proper temper and slitting of the Claws and the proper Hardening of the Edges of the Claws, fitting them to grip and hold a nail firmly. They are automatically tempered, producing even heats, and the temper is drawn by a thermometer, insuring absolute uniformity.



POLISHED.

NAIL.

Adze Eye, Bell Face, Polished, Dull Black Finish on Neck and Under Claws, **KEEN KUTTER** Grade White Hickory Handle.

Nos.	K611	K611½	K612	K613	K614
Wgt. without Hdl., ozs.	20	16	13	7	5
Length over all, in.	14	13	13	12	11
Wgt. doz. about, lbs.	22	18	15	10	7
Per dozen	\$12.00	11.50	11.00	10.50	10.50



POLISHED.

NAIL.

Adze Eye, Plain Face; Polished; Dull Black Finish under Claw; with **KEEN KUTTER** Grade White Hickory Handle.

Nos.	K1	K1½	K2	K3
Weight without Handle, ozs.	20	16	13	7
Length over all, inches	14	13	13	12
Weight per dozen about, lbs.	22	18	15	10
Per dozen	\$12.00	11.50	11.00	10.50



NAIL.

Adze Eye, Bell Face, Full Nickel Plated, with **KEEN KUTTER** Grade White Hickory Handle.

Nos.	K11	K11½	K12	K13
Weight without Handle, ozs.	20	16	13	7
Length over all, inches	14	13	13	12
Weight per dozen about, lbs.	22	18	15	10
Per dozen	\$13.00	12.50	12.00	11.50



NAIL (OR BOX).

Adze Eye, Checkered Bell Face, Full Nickel Plated; with **KEEN KUTTER** Grade White Hickory Handle.

Nos.	KC11½	KC12
Weight without Handle, ozs.	16	13
Length over all, inches	13	13
Weight per dozen about, lbs.	18	15
Per dozen	\$13.00	12.50



NAIL.

Adze Eye, Octagon Neck and Head, Full Nickel Plated, with Ebonyized Hickory Handle.

Nos.	K511	K511½	K512	K513
Wgt. without Handle, ozs.	21	17	14	8
Length over all, inches	14	13	13	12
Wgt. per dozen about, lbs.	22	18	15	10
Per dozen	\$15.50	15.00	14.50	14.00



NAIL.

Adze Eye, Octagon Head, Round Neck; Full Nickel Plated, with **KEEN KUTTER** Grade White Hickory Handle.

Nos.	K110	K110½	K112	K113
Wgt. without Handle, ozs.	21	17	14	8
Length over all, inches	14	13	13	12
Wgt. per dozen about, lbs.	22	18	15	10
Per dozen	\$14.50	14.00	13.50	13.00

One in a Carton; Protects the Finish and makes a Convenient Retailers' Package.
One-half Dozen in a Cardboard Box; Six Dozen in a Case.

In Finishing **KEEN KUTTER** Nickel Plated Hammers go over Three or Four More Buffing Wheels than any other High Grade Nickel Plated Hammers on the Market; this gives a Mirror-like Perfection of Finish.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

HANDLED HAMMERS.

KEEN KUTTER®—NICKEL PLATED.

Drop Forged from One Solid Piece of Highest Grade Crucible Steel; Thoroughly Tested; Handled with KEEN KUTTER Grade Select White Hickory Handle, Bastard Cut, AND FASTENED WITH OUR GRELLNER PATENT WEDGE.

KEEN KUTTER® HAMMERS.

The Handles are Select KEEN KUTTER Grade White Hickory, the grain running with the long Diameter of the Handle, Giving the full Strength of the Wood against any Strain which can be Brought upon the Handle.



MACHINISTS' BALL PEIN.

Octagon Pattern, Full Nickel Plated; Hardened Face and Pein; Spring Neck Handle.

Nos.	KM6/0	KM5/0	KM4/0	KM3/0	KM2/0	KM1	KM0	KM2	KM3	KM4
Weight without Handle, ozs.	3	4	6	8	12	16	20	24	28	32
Length over all, inches	10	11	12	12½	13½	14¼	15	16	16½	17
Weight per dozen about, lbs.	4	5	6¼	10½	14	16	21	24	28	30
Per dozen	\$12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00

One-third Dozen in a Cardboard Box; Six Dozen in a Case.

KEEN KUTTER® HAMMERS.

Our KEEN KUTTER Trade Mark Design is Neatly Stamped into the Head of each Hammer, and a small and attractive Label is Fastened to the Handle, Embodying the talking points of the Grellner Wedge, and our Guarantee of Quality.



BLACKSMITHS' HAND.

Full Nickel Plated; Hardened Face and Pein.

Nos.	KB0	KB1	KB2	KB3	KB4
Weight without Handle, ozs.	26	32	42	48	56
Length over all, inches	15	15½	16	16½	17
Weight per dozen about, lbs.	23	29	36	43	48
Per dozen	\$17.50	18.50	19.50	20.50	21.50

One-third Dozen in a Cardboard Box; Six Dozen in a Case.

KEEN KUTTER® HAMMERS.

Drop Forged by an Improved Process, which closely Hammers the Grain of the Steel and does not Crystallize it as some of the Older Processes.



MACHINISTS' RIVETING.

Plain Eye; Full Nickel Plated; Hardened Face and Pein.

Nos.	KR0	KR1	KR2	KR3	KR4	KR5
Weight without Handle, ozs.	4	7	9	12	15	18
Length over all, inches	11	11½	12	12½	13	13½
Weight per dozen about, lbs.	5	8	9½	12½	16	18½
Per dozen	\$7.00	7.25	7.50	7.75	8.00	8.50



BRAD.

Plain Eye, Tempered Claws; Full Nickel Plated.

No.	KB20
Weight without Handle, ozs.	4
Length over all, inches	11¼
Weight per dozen about, lbs.	5¼
Per dozen	\$7.00

One-half Dozen in a Cardboard Box; Six Dozen in a Case.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED

HANDLED HAMMERS.

KEEN KUTTER BLACK JACK.*

Drop Forged from One Solid Piece of Highest Grade Crucible Steel; Hardened Face; Tempered Claws, Thoroughly Tested; Handled with KEEN KUTTER Grade Select White Hickory Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.



NAIL.
Adze Eye, Plain Face, Dull Black Finish; Polished Face and Tips of Claws.

Nos.	KJ1	KJ1½	KJ2
Weight without Handle, ozs.	20	16	13
Length over all, inches	14	13	13
Weight per dozen about, lbs.	22	18	15
Per dozen	\$12.00	11.50	11.00



NAIL.
Adze Eye, Bell Face, Dull Black Finish; Polished Poll and Tips of Claws.

Nos.	KJ11	KJ11½	KJ12
Weight without Handle, ozs.	20	16	13
Length over all, inches	14	13	13
Weight per dozen about, lbs.	22	18	15
Per dozen	\$12.00	11.50	11.00



NAIL.
Adze Eye, Octagon Neck and Head, Dull Black Finish; Polished Poll and Tips of Claws.

Nos.	KJ511	KJ511½	KJ512
Weight without Handle, ozs.	21	17	14
Length over all, inches	14	13	13
Weight per dozen about, lbs.	22	18	15
Per dozen	\$14.50	14.00	13.50

One-twelfth Dozen in a Carton; Protects the Finish and Makes a Convenient Retailers' Package.
One-half Dozen in a Cardboard Box; Six Dozen in a Case.



No. KJMO.

MACHINISTS' BALL PEIN.

Octagon Pattern; Dull Black Finish, with Polished Striking Poll and Ball Pein.

Nos.	KJM3/0	KJM2/0	KJM0	KJM1	KJM2	KJM3	KJM4
Weight without Handle, ozs.	8	12	16	20	24	28	32
Length over all, inches	12½	13½	14½	15	16	16½	17
Weight per dozen about, lbs.	16½	14	16	21	24	28	30
Per dozen	\$12.00	12.00	12.50	13.50	14.50	15.50	16.50

One-third Dozen in a Cardboard Box; Six Dozen in a Case.



No. KJR2.

MACHINISTS' RIVETING.

Plain Eye; Dull Black Finish; Polished Face, Top and Cross Pein.

Nos.	KJR0	KJR1	KJR2	KJR3	KJR4	KJR5
Weight without Handle, ozs.	4	7	9	12	15	18
Length over all, inches	11	11½	12	12½	13	13½
Weight per dozen about, lbs.	5	8	9½	12½	16	18½
Per dozen	\$7.00	7.25	7.50	7.75	8.00	8.50

One-half Dozen in a Cardboard Box; Six Dozen in a Case.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

HANDLED HAMMERS.

KEEN KUTTER®—NICKEL PLATED.

Drop Forged from One Solid Piece of Highest Grade Crucible Steel; Hardened Face; Tempered Claws; Thoroughly Tested; Bastard Cut Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.

On all KEEN KUTTER Hammers we insist upon Severe and Carefully Measured Tests, which demonstrate and enable us to Guarantee the proper hardness of the Striking Faces; the proper Temper and Slitting of the Claws, and the proper Hardening of the Edges of the Claws, fitting them to grip and hold a Nail firmly. They are automatically tempered, producing even heats, and the temper is drawn by a thermometer, insuring absolute uniformity.



NAIL OR RIPPING.

Adze Eye, Bell Face; Straight Claws, Full Nickel Plated, with Nonpareil Grade White Hickory Handle.

No. K311½—Weight without Handle, 16 ozs.; Length over all 13 inches; Weight per dozen about 18 lbs.\$12.50
One in a Carton; Protects the Finish and Makes a Convenient Retailers' Package. One-half Dozen in a Cardboard Box; Six Dozen in a Case.



FARRIERS'.

Adze Eye, Octagon Neck; Round Tapering Poll; Full Nickel Plated; Tempered Claws.

No. KFS—Weight without Handle 10 ozs.; Length over all 13½ inches; Weight per dozen about 12 lbs.\$11.50
One-half Dozen in a Cardboard Box; Six Dozen in a Case.



FARRIERS'.

Adze Eye (Heller Pattern); Whale Back Claws; Full Nickel Plated; Tempered Claws.

Nos.	KF10	KF12
Weight without Handle, ozs.	10	12
Length over all, inches	13½	14
Weight per dozen about, lbs.	13	15
Per dozen	\$9.50	10.50



No. KF7.

FARRIERS'.

Round Poll; Full Nickel Plated; Tempered Claws.

PLAIN EYE.

No. KF6—Weight without Handle 7 ozs.; Length over all 12½ inches; Weight per dozen about 9 lbs.\$7.75

ADZE EYE.

No. KF7—Weight without Handle 7 ozs.; Length over all 13 inches; Weight per dozen about 10½ lbs. 9.00

One-half Dozen in a Cardboard Box; Six Dozen in a Case.

TACK HAMMERS.



KEEN KUTTER®

Highest Grade Crucible Steel, Nickel Plated; Carefully Tempered Claws and Hardened Face, with Second Growth Hickory Handle.

Adze Eye; Upholsterers' Pattern; Non-Magnetic.

No. K400—KEEN KUTTER®; Length of Head 6 inches; Length over all 10½ inches Weight per dozen about 6½ lbs.\$10.00

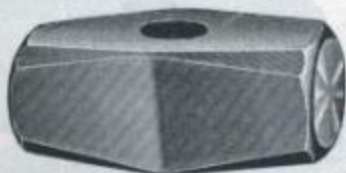


Adze Eye; Horse Shoe Pattern; Magnetic.

No. K500—KEEN KUTTER®; Length of Head 4½ inches; Length over all 10½ inches; Weight per dozen about 6 lbs.\$10.00

One-half Dozen in a Cardboard Box.

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**EYE HAMMERS.****SHORT STRIKING HAMMERS.**

Solid Forged Steel, Oil Finish, with Hardened and Polished Face.

Oregon Pattern, Straight Face.

	No. OSS.					
Weight each, lbs.	3	3½	4	4½	5	6
Length, inches	4¼	4½	5	5¼	5½	5¾
Per pound	\$0.40	.40	.40	.40	.30	.30
Weight each, lbs.	7	8	9	10	12	14
Length, inches	6	6¼	6½	6¾	7	7½
Per pound	\$0.30	.30	.30	.30	.30	.30

Missouri Pattern, Rounding Face.

	No. MRS.			
Weight each, lbs.	6	6½	7	8
Length, inches	5¼	6	6½	7
Per pound	\$0.30	.30	.30	.30

**LONG STRIKING HAMMERS.**

Nevada Pattern, Straight Face.

Solid Forged Steel, Oil Finished, with Hardened and Polished Face.

	No. NLS.										
Weight each, lbs.	3	3½	4	4½	5	6	7	8	9	10	12
Length, inches	5½	5¾	6	6¼	6½	6¾	7	7¼	7½	7¾	8½
Per pound	\$0.40	.40	.40	.40	.30	.30	.30	.30	.30	.30	.30

**BLACKSMITHS' SLEDGES.**

Solid Forged Steel, Oil Finish, with Hardened and Polished Face.

Single Face, Hardened Cross Pein.

	No. BS.			
Weight each, lbs.	6	8	10	12
Length, inches	6¼	7	7¼	7½
Per pound	\$0.30	.30	.30	.30
Weight each, lbs.	14	16	18	
Length, inches	8	8½	8¾	
Per pound	\$0.30	.30	.30	



Double Face.

	No. BD.			
Weight each, lbs.	6	8	10	12
Length, inches	6½	7	7½	7¾
Per pound	\$0.30	.30	.30	.30

**BLACKSMITHS' HAND HAMMERS.**

Single Face, Cross Pein.

Solid Forged Steel, Oil Finish, with Hardened and Polished Face; Hardened Pein.

	No. BH.					
Weight each, lbs.	1½	2	2½	3	3½	4
Length, inches	4¼	4½	4¾	5	5¼	5½
Per pound	\$0.50	.50	.50	.40	.40	.40

Packed Loose.

EYE HAMMERS.SPALLING OR STONE
HAMMERS.Solid Forged Steel, Oil Finish, with
Hardened and Polished Face.**No. J—Single Face.**

Weight each, lbs.	4	5	6	8
Length, inches	6 1/4	6 3/4	7 1/4	8
Per pound	\$0.50	.40	.40	.40
Weight each, lbs.	10	12	14	16
Length, inches	8 1/2	9	9 3/4	9 3/4
Per pound	\$0.40	.40	.40	.40

**No. K—Double Face.**

Weight each, lbs.	4	5	6	8
Length, inches	5 3/4	6 1/4	7	7 3/4
Per pound	\$0.50	.40	.40	.40
Weight each, lbs.	10	12	14	16
Length, inches	8 1/2	8 3/4	9 1/4	9 3/4
Per pound	\$0.40	.40	.40	.40

**NAPPING HAMMERS.****No. N—Double Face.**

Weight each, lbs.	2	2 1/2	3	3 1/2
Length, inches	5	5 1/4	6	6 1/4
Per pound	\$0.50	.50	.40	.40
Weight each, lbs.	4	4 1/2	5	
Length, inches	6 1/2	7	7 1/4	
Per pound	\$0.40	.40	.30	

**HAND DRILLING HAMMERS.****No. CHD—Double Face, California Pattern.**

Weight each, lbs.	3	3 1/2	4	4 1/2	5
Length, inches	5	5 1/4	5 3/4	6 1/4	6 3/4
Per pound	\$0.50	.50	.50	.50	.40

**STONE MASONS'
HAMMERS.**Solid Forged Steel, Painted Red,
with Polished, Hardened Face,
and Polished Bit.**No. M—Single Face, without Teeth.**

Weight each, lbs.	3	3 1/2	4	4 1/2	5	5 1/2
Length, inches	6 1/2	6 3/4	7	7 1/4	7 1/2	7 3/4
Per pound	\$0.55	.55	.55	.55	.50	.50
Weight each, lbs.	6	6 1/2	7	7 1/2	8	
Length, inches	8 3/4	8 1/2	8 3/4	8 3/4	8 3/4	
Per pound	\$0.50	.50	.50	.50	.50	

**No. MT—Single Face, with Teeth.**

Weight each, lbs.	3	3 1/2	4	4 1/2
Length, inches	6 1/4	6 3/4	7	7 1/4
Per pound	\$0.60	.60	.60	.60
Weight each, lbs.	5	5 1/2	6	
Length, inches	7 1/2	7 3/4	8	
Per pound	\$0.55	.55	.55	

**STONE SLEDGES.**

With Hardened and Polished Face.

No. S—Single Face.

Weight each, lbs.	6	8	10	12
Length, inches	7	7 1/2	8	8 1/2
Per pound	\$0.30	.30	.30	.30
Weight each, lbs.	14	16	18	20
Length, inches	9	9 1/4	9 1/2	10
Per pound	\$0.30	.30	.30	.30

**BUSH HAMMERS.**With Hardened Toothed Faces.
Double Face.

Nos.	1B	2B
Weight each, lbs.	8 1/4	7 1/4
Length, inches	8 1/2	8 1/2
Diameter, inches	2	1 3/4
Number of Teeth (Coarse End)	36	132
Number of Teeth (Fine End)	81	144
Each	\$8.25	7.25

MACADAM OR CRACKING HAMMERS.

Solid Forged Steel; Oil Finish; Hardened.

No. C—Round Pattern.

Weight each, lbs.	1 1/4	1 1/2
Diameter, inches	2 3/4	3
Each	\$0.95	1.15

Packed Loose.



TRADE MARK:
"ARKANSAS"
REGISTERED.

MAULS.



Solid Forged Steel, with Hardened and Polished Faces.

RAILROAD SPIKE MAULS.

No. RS—Single Face; Tapering End;
Oil Finished.

	6	8	10
Weight each, lbs.	9½	10½	11½
Length, inches	9½	10½	11½
Per pound	\$0.30	.30	.30

SHIP OR TOP MAULS.

No. ST—Single Face; Tapering End;
Painted Red, with Polished Ends.

	4	4½	5	5½	6
Weight each, lbs.	4	4½	5	5½	6
Length, inches	8¼	8½	8¾	9	9¼
Per pound	\$0.42	.42	.42	.42	.42

WOOD CHOPPERS' MAULS.



No. E—STANDARD, Regular Pattern.

Solid Forged Steel; Painted Red; Polished and
Hardened Face and Bit.

	7	8	9	10
Weight each, lbs.	7	8	9	10
Length, inches	8½	8¾	9	9
Per pound	\$0.36	.36	.36	.36

No. D—STANDARD, Oregon Pattern.

Solid Forged Steel, Oil Finished; Hardened Face
and Bit.

	6	7	8	9	10
Weight each, lbs.	6	7	8	9	10
Length, inches	8¼	8½	8¾	9	10
Per pound	\$0.36	.36	.36	.36	.36

Packed Loose.

WEDGES.



WOOD CHOPPERS'.

Hardened Head and Bit; Oil Finished.

CALIFORNIA, TRUCKEE PATTERN.

No. T—STANDARD; Forged Bessemer Steel.

	4	4½	5	5½
Weight each, lbs.	4	4½	5	5½
Width at Point, inches.....	2	2½/16	2¾	2¾
Length over all, inches.....	8¾	9½	9½	10
Per pound	\$0.25	.25	.25	.25

	6	7	8
Weight each, lbs.	6	7	8
Width at point, inches.....	2½	2¾	3
Length over all, inches.....	10½	11	11
Per pound	\$0.25	.25	.25

Packed in Kegs of about 250 lbs; Straight Sizes.

WOOD CHOPPERS' OR TIE MAKERS'.

Extra Quality Solid Forged Steel, Oil Finished.

ARKANSAS* Spread Point.

	3	3½	4	4½
Weight each, lbs.	3	3½	4	4½
Width at Point, inches.....	2½/16	2¾	2¾	2¾
Length over all, inches.....	6½	7½	7¾	8¾
Per pound	\$0.20	.20	.20	.20

	5	3 to 4
Weight each, lbs.	5	3 to 4
Width at Point, inches.....	2½	2½/16 to 2¾
Length over all, inches.....	9¾	6½ to 9¾
Per pound	\$0.20	.20

Packed about 50 lbs. in a Wood Box; Either Straight
or Assorted Sizes.

CEMENT WORK.

SIDEWALK BUILDING.



Excavate for foundation to a depth of from 8 to 12 inches below the surface of the proposed walk, depending upon the soil and climate conditions; where the soil is clayey or is subject to heavy frosts, the foundation should be of good depth to allow a drainage and to take up frost expansion. After excavation has been made, the same is filled to within 4 inches of the top of proposed walk with well tamped, coarse gravel, broken stones, or cinders, then, after a 4-inch framework is placed in position, a 3 inch coat of thoroughly tamped grout is laid on the foundation. This grout consists of gravel or crushed stone, sand and cement sufficiently moistened, so that water will show at the top when solidly tamped. The grout is then cut in blocks or sections about 4 feet by 4 feet, or 5 feet by 5 feet; then, before this layer has lost its moisture or become set, the top dressing or wearing coat, consisting of sand and cement with enough water to make a stiff mortar, is laid onto the grout. This coat is struck off level with top of frame and smoothed with a float, always being careful to cut into blocks corresponding with those of the grout. The joints between the blocks are then finished with a jointer and the edges finished with a neat, rounding, bevel or square effect with an edger properly made for that purpose. The surface is then rolled with an indentation or fine line roller, which prevents the walk from becoming slippery and gives it a neat appearance.

CURB AND GUTTER.

Excavate from 26 to 32 inches below top of proposed curb and a little wider than combined curb and gutter, fill with well tamped, coarse gravel or broken stone to within 6 inches of top of gutter, then place in position a framework 6 inches high and the width of the combined curb and gutter, the back-side of which extends to the top of proposed curb. Into this tamp concrete, consisting of one part cement, two parts sand and five parts gravel, to a depth of 5 inches, separating into sections not longer than 6 feet. A 1½ inch plank, forming the face of the curb, is placed in position with spreader boards of the desired width or curb between this and back frame, this plank being firmly held in position by curb clamp. Into this is tamped a grout mixture to within ¾ inch of top of curb. If the grout has been firmly tamped, the face form can be removed by releasing the clamps and a ¾ inch facing consisting of three parts cement, five parts sand, immediately applied to top and sides of curb and a 1 inch coat to top of gutter, increasing the thickness towards outside of gutter to give proper drainage slope. This is worked to an even surface by drawing a straight edge, laid parallel with curb, from top of curb to street side of gutter; after smoothly floating, the upper face edge of curb is finished with a curbing edger having the desired shape, and the angle between curb and gutter with a curb-gutter finishing tool, the outer edges being finished with a regular sidewalk edger. The joints, which are cut to correspond with those of the grout, are finished with a short sidewalk jointer, or preferably with a roller jointer, as a jointer of this kind is more easily operated in the angle formed at the juncture of curb and gutter. Another convenient and popular way of making a curb is to plaster the finishing coat onto the frame and then tamp grout in back of finishing coat to within ¾ inch of top, which space is filled with finishing coat and struck off even with frame, the edges being finished with a curbing edger before framework is removed.

MIXING.

The secret of mixing material for both grout and top dressing lies in determining the voids of the materials used, which must be filled in order to make the mixture as dense and strong as possible. For the grout, the voids in the gravel must be filled with cement. For the top coat, the voids in the sand must be filled with cement, but as it is sometimes impossible, if not impracticable, for one to determine exactly the voids of each of the materials used, we give the following rules for mixtures which, if adhered to and thoroughly tamped, a cement will be obtained with a crushing strength of 1,000 pounds per square inch of surface.

MIXTURE FOR GROUT.

Where medium sized gravel or crushed stone is used, one part cement, two parts sand, five parts gravel or stone.

MIXTURE FOR TOP DRESSING.

Three parts cement, five parts sand. Both in the grout and the top dressing the materials should be thoroughly mixed dry and again mixed after adding water. We would add that the above formulas will only apply where medium sized gravel or crushed stone is used, for if the gravel is very coarse it will be readily seen that it will require more of the finer material to fill the voids and the only correct mixtures are those in which the finer materials will exactly fill the voids of the coarser.

COLORING.

Where a special color is desired, we would recommend for

- Black, 2 per cent. carbon black.
- Red, 10 per cent. raw iron oxide.
- Blue, 6 per cent. ultramarine.
- Brown, 6 per cent. roasted iron oxide.
- Buff, 10 per cent. ochre.

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TRADE MARK
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

GRANITOID OR CEMENT TOOLS.

KEEN KUTTER®

Highest Grade Bronze Metal, with Burnished Face; Rubberoid Finish Hardwood Handles.

JOINTERS.



No. K01—JOINTER; Both Ends Rounded; 2½ inches Wide, 6 inches Long, 3 inches High; 3¾ inch Handle; Cuts ½ inch Deep; Weight per dozen about 17 lbs. \$18.00



No. K011—NARROW JOINTER; Both Ends Rounded; 1½ inches Wide, 8 inches Long, 3¼ inches High; 3¾ inch Handle; Cuts ½ inch Deep; Weight per dozen about 19 lbs. \$18.00



No. K05—STRAIGHT END JOINTER; One End Rounded; 3 inches Wide, 6 inches Long, 3 inches High; 3¾ inch Handle; Cuts ½ inch Deep; Weight per dozen about 17 lbs. \$18.00



No. K042—NARROW STRAIGHT END JOINTER; One End Rounded; 1½ inches Wide, 8 inches Long, 3¾ inches High; 3¾ inch Handle; Cuts ½ inch Deep; Weight per dozen about 19 lbs. \$18.00

EDGERS.



No. K02.

No. K02—EDGER; Both Ends Rounded; 2½ inches Wide, 6 inches Long, 3 inches High; 3¾ inch Handle; ¾ inch Turned Edge, with ¾ inch Radius; Weight per dozen about 16 lbs. \$18.00

No. K04—EDGER; Both Ends Rounded; 3 inches Wide, 6 inches Long, 3¾ inches High; 3¾ inch Handle; 1 inch Turned Edge, with ¾ inch Radius; Weight per dozen about 17 lbs. 18.00

No. K0100—CURBING EDGER; Slightly Oval Surface; 3½ inches Wide, 6½ inches Long, 4¼ inches High; 3¾ inch Handle; 2 inch Turned Edge, with 1½ inch Radius; Weight per dozen about 20 lbs. 24.00



No. K0100.

One-sixth Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.



GRANITOID OR CEMENT TOOLS.

KEEN KUTTER®

Highest Grade Bronze Metal, with Burnished Face; Rubberoid Finish Hardwood Handles.

EDGERS.



No. K038—NARROW EDGER: Both Ends Rounded; $1\frac{1}{4}$ inches Wide, 8 inches Long, $3\frac{1}{4}$ inches High; $3\frac{1}{2}$ inch Handle; $\frac{1}{4}$ inch Turned Edge, with $\frac{1}{4}$ inch Radius; Weight per dozen about 18 lbs.\$18.00

Per Dozen



No. K039—NARROW EDGER: Both Ends Rounded; $1\frac{1}{4}$ inches Wide, 8 inches Long, $3\frac{1}{4}$ inches High; $3\frac{1}{2}$ inch Handle; 1 inch Turned Edge, with $\frac{1}{4}$ inch Radius; Weight per dozen about 18 lbs.\$19.00

Per Dozen

One-sixth Dozen in a Cardboard Box.



No. K037—EDGER: Both Ends Rounded; $1\frac{1}{4}$ inches Wide, 6 inches Long, 3 inches High; $3\frac{1}{2}$ inch Handle; $\frac{1}{4}$ inch Radius; Outside of Cutting Edge has a Guide which runs on the Framework; Weight per dozen about 13 lbs.\$17.00

Per Dozen

One-quarter Dozen in a Cardboard Box.



No. K017—SQUARE EDGER: Both Ends Rounded; 3 inches Wide, 6 inches Long, $3\frac{1}{2}$ inches High; $3\frac{1}{2}$ inch Handle; Cutting Edge $1\frac{1}{2}$ inches; Weight per dozen about 19 lbs.\$19.00

Per Dozen

One-sixth Dozen in a Cardboard Box.

CORNER TOOL.



No. K06—CORNER TOOL: One End Straight and One End Curving Back; $1\frac{1}{4}$ inch Sides; 6 inches Long, 3 inches High; 4 inch Handle; Weight per dozen about 15 lbs.\$18.00

Per Dozen

One-sixth Dozen in a Cardboard Box.

ROLLER.



No. K015—INDENTATION ROLLER: 10 inches Long, 4 inches in Diameter; Varnished Hardwood Handle 14 inches Long; Makes Square Impressions; Weight each about 10 lbs.\$12.00

Each

Packed Loose.

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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

GRANITOID OR CEMENT TOOLS.

KEEN KUTTER®

ROLLERS.

Highest Grade Bronze Metal.



No. K020—LINE ROLLER; 10 inches Long, 4 inches in Diameter; Varnished Hardwood Handle 14 inches Long; Makes Line Impressions giving appearance of Bush Hammered Stone; 6 Grooves to the inch; Weight each about 11 lbs.\$12.00

Each



No. K016—DRIVEWAY ROLLER; 10 inches Long, 4 inches in Diameter; Varnished Hardwood Handle 14 inches Long; Makes 1/2 inch Grooves 2 inches Apart; For Grooving Driveways so horses will not slip; Weight each about 10 lbs.\$11.00

Each

Packed Loose.

FLOATS.

Highest Grade Aluminum; Rubberoid Handles.



No. K52—FLOAT; 4 1/2 x 12 inches, Smooth Faced; 6 inch Handle; 2 3/4 inches High; Weight per dozen about 18 lbs\$24.00

Per Dozen



No. K59—FLOAT; 4x10 inches, Corrugated Both Ways; 5 1/2 inch Handle; 2 3/4 inches High; Weight per dozen about 18 lbs.\$24.00

Per Dozen

One-sixth Dozen in a Cardboard Box.

RADIUS TOOLS.

Highest Grade Bronze Metal; Polished Hardwood Handles.



No. K023—RADIUS TOOL; 5 1/2 inches Long, 1 1/2 inches Wide; 3 3/4 inch Handle; One inch Turned Edge, with 1/2 inch Radius; Weight per dozen about 6 lbs.\$12.00

No. K011—RADIUS TOOL; 5 1/2 inches Long, 1 1/2 inches Wide; 3 3/4 inch Handle; 1 1/4 inch Turned Edge, with 1/2 inch Radius; Weight per dozen about 8 lbs.12.00

Per Dozen

One-half Dozen in a Cardboard Box.

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TRADE MARK:
CHIPAWAY
REGISTERED.

GRANITOID OR CEMENT TOOLS.

CHIPAWAY



ROLLER JOINTERS.



Special Grade Cast Iron, Nickel Plated, with Burnished Face; $4\frac{1}{2}$ inch Varnished Hardwood Handle; Handle Bracket $3\frac{1}{2}$ inches Long.

No. 48—ROLLER JOINTER; Cylinder 2 inches
Long, 2 inches Diameter; Cuts $\frac{1}{2}$ inch
Deep Per Dozen \$18.00

ROLLER EDGERS.



No. 49—ROLLER EDGER; Cylinder 2 inches
Long, 2 inches Diameter; $\frac{3}{4}$ inch Turned
Edge, with $\frac{3}{4}$ inch Radius Per Dozen \$18.00
No. 50—ROLLER EDGER; Cylinder 2 inches
Long, 2 inches Diameter; 1 inch Turned
Edge, with $\frac{3}{4}$ inch Radius 18.00

One-sixth Dozen in a Cardboard Box; Weight per Dozen about 14 lbs.

TAMPERS OR RAMMERS.



No. 21.



No. 8/8.

Standard Cast Iron.

Cast Iron, Natural Finish 3 inch Socket; Complete with 4 ft. Hardwood Handles.

No. 21—SQUARE; 8x8 inches; $\frac{3}{4}$ inches Thick; Weight each about 20 lbs.	Each \$3.00
No. 22—SQUARE; 10x10 inches; $\frac{3}{4}$ inches Thick; Weight each about 25 lbs.	4.00
No. 23—ROUND; 6 inches; 2 inches Thick; Weight each about 20 lbs.	3.00
No. 24—ROUND; 7 inches; 2 inches Thick; Weight each about 25 lbs.	4.00

Standard Steel.

Steel Plate $\frac{7}{16}$ inch Thick; Riveted to Heavy Malleable Iron Collar 5 inches in Diameter, $4\frac{1}{2}$ inches Deep; Complete with 4 foot Hardwood Handles.

No. 8/8—SQUARE; 8x8 inches; Weight each about 12 lbs.	\$3.00
No. 8/10—SQUARE; 10x10 inches; Weight each about 17 lbs.	4.50

Packed Loose.

RAISED (TUCK) POINTERS.



Special Grade Cast Iron, Nickel Plated, with Burnished Concave Groove; $4\frac{1}{2}$ inch Varnished Hardwood Handle, with Brass Ferrule; Used for making a Raised Pointing or Beading on Cement Block, Brick or Stone Walls.

No. 12—TUCK POINTERS, with Groove $4\frac{1}{2}$ inches Long.

Width of Bead or Groove, inches.....	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen about, lbs.....	4	4	4
Per dozen	\$6.00	6.00	6.00

One Dozen in a Cardboard Box.

BRICKLAYERS' TOOLS.



BRICKLAYERS' SETS.

Forged Tool Steel, Oil Tempered, Natural Finish;
Shank $\frac{3}{4}$ inch in Diameter; Single Bevel
Blade $4\frac{1}{2}$ inches Wide; Length over all $7\frac{1}{2}$
inches; Weight per dozen about 18 lbs. \$0.50

Per Pound

BRICKLAYERS' CHISELS.

Forged Tool Steel, Oil Tempered, Natural Finish;
Shank $\frac{3}{4}$ inch in Diameter; Double Bevel Blade.

Width of Blade, inches.....	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Length over all, inches.....	7	$7\frac{1}{2}$	$7\frac{3}{4}$
Weight per dozen about, lbs.....	16	18	$19\frac{1}{2}$
Per lb.	\$0.50	.50	.50

STONE CUTTERS' TOOLS.

Forged Tool Steel, Oil Tempered, Natural Finish; For Use on Limestone Only.



STONE CUTTERS' POINTS.

Mallet Head; $\frac{3}{4}$ inch Steel; Width of Blade $3\frac{1}{4}$
inch; Length over all $8\frac{1}{2}$ inches; Weight
per dozen about 15 lbs. \$0.50

Per Pound



STONE CUTTERS' PITCHING TOOLS.

Mallet Head; $\frac{3}{4}$ inch Steel; Width of Blade 2
inches; Single Bevel; Length over all 9
inches; Weight per dozen about 26 lbs. \$0.50

Per Pound

STONE CUTTERS' CHISELS, WITHOUT
TEETH.

	Mallet Head; Double Bevel Blade.					
Width of Blade, inches..	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Length over all, inches..	9	9	9	9	9	9
Wgt. per doz. about, lbs.	10	15	17	18	19	21
Per lb.	\$0.50	.50	.50	.50	.50	.50

Packed Loose.



STONE CUTTERS' CHISELS, WITH TEETH.

	Mallet Head; Double Bevel Blade.					
Width of Blade, inches..	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Length over all, inches..	9	9	9	9	9	9
Wgt. per doz. about, lbs.	10	15	17	18	19	21
Per lb.	\$0.50	.50	.50	.50	.50	.50

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

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BARS.

PINCH BARS.



CARPENTERS' PINCH (OR WRECKING) BARS.

Forged from Best Open Hearth Steel, Oil Finished; with Wedge or Chisel Point at Upper End; Length over all 30 inches; Upper End $\frac{3}{4}$ inch Round; Lower End $\frac{3}{4}$ inch Square.

Each		Each	
No. K30—KEEN KUTTER*, WITH SPLIT PINCH POINT OR CLAW AT LOWER END; Extra Finished and Tempered; Weight each about 5 $\frac{1}{4}$ lbs.	\$3.00	No. P—STANDARD, WITH PLAIN PINCH POINT AT LOWER END; Weight each about 5 $\frac{1}{4}$ lbs.	\$2.00

CROW BARS.



Forged Steel, Oil Finished; Round body, with Octagon and Squared Lower End; Hardened Point.

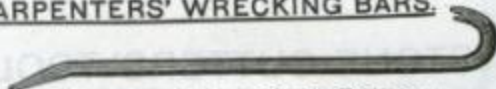
No. WP—Wedge Point.

Weight each, lbs.	10	12	14	16
Length, feet	4	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{3}{4}$
Per lb.	\$0.12	.12	.12	.12
Weight each, lbs.	18	20	22	25
Length, feet	5	5 $\frac{1}{6}$	5 $\frac{1}{2}$	5 $\frac{3}{4}$
Per lb.	\$0.12	.12	.12	.12

No. PP—Pinch Point.

Weight each, lbs.	10	12	14	16	18
Length, feet	4	4 $\frac{1}{2}$	4 $\frac{1}{2}$	4 $\frac{3}{4}$	5
Per lb.	\$0.12	.12	.12	.12	.12
Weight each, lbs.	20	22	25	30	
Length, feet	5 $\frac{1}{6}$	5 $\frac{1}{2}$	5 $\frac{3}{4}$	6	
Per lb.	\$0.12	.12	.12	.12	

CARPENTERS' WRECKING BARS.



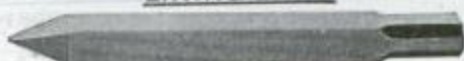
Marshalltown; Goose Neck Pattern.

Forged from Octagon Tool Steel, $\frac{3}{4}$ inch Diameter, Oil Finished; Hardened at Both Ends; Wedge or Chisel Point at Upper End; Goose-Neck Bend and Claw at Lower End.

No. MG30—30 inches Long; Weight each about 4 $\frac{1}{4}$ lbs.	Each \$2.00
No. MG24—24 inches Long; Weight each about 3 $\frac{1}{2}$ lbs.	1.80

RAILROAD TRACK TOOLS.

LINING BARS.

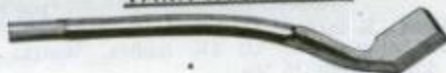


Forged Steel, Oiled Finish; Round Body, with Octagon and Squared Lower End; Tempered at Working End.

No. 30—Lining Bar; Diamond Point.

Weight each, lbs.	18	20
Length about, feet	5	5
Per lb.	\$0.08	.08

TAMPING BARS.



No. 31—Tamping Bar; with Flattened Rectangular Tamper.

Weight each, lbs.	14
Length about, feet	6
Per lb.	\$0.09

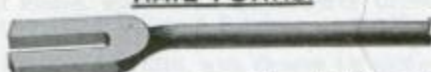
CLAW BARS.



Forged Steel, Oiled Finish; Round Body, with Squared Lower End, with Tempered Claw, and with Tempered Bent Pinch Point at Upper End.

Per Pound		Per Pound	
No. 26—GOOSE NECK PATTERN; Length about 5 ft.; Weight each about 29 lbs.	\$0.10	No. 28—VERONA PATTERN, with Heel; Length about 5 ft.; Weight each about 29 lbs.	\$0.10

RAIL FORKS.



Forged Steel, Japanned Finish; 1 $\frac{1}{4}$ inch Round Handle, with Two Flattened Prongs and Chisel Point on Other End.

Per Pound	
No. 3—RAIL FORKS; Opening between Prongs $\frac{5}{8}$ inches Wide, 3 $\frac{1}{4}$ inches Deep; Width at Prongs 3 inches; Length 33 inches; Weight each about 14 lbs.	\$0.15
Packed Loose.	

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

APRONS.



Showing
Rear View of
KEEN KUTTER
Apron, with
Adjustment.

KEEN KUTTER*—CARPENTERS'.

10 ounce Extra Select Duck, with Two Double Bottom Nail Pockets, One Rule Pocket, Two Triangular Top Pockets and Loop for Hammer; All Corners Riveted; Seams Double Sewed and Edges Bound with Brown Leather; Double Stitched Rounding Pockets; Adjustable by Suspender Device to various Heights.

	Per Dozen
No. K—KEEN KUTTER*: WHITE DUCK; Length 21 inches; Width 21 inches; Pocket Piece 8 inches Deep; Top Pocket 8 inches Wide; Weight per dozen about 6 lbs.	\$9.00
No. KB—KEEN KUTTER*: BROWN DUCK; Length 21 inches; Width 21 inches; Pocket Piece 8 inches Deep; Top Pockets 8 inches Wide; Weight per dozen about 6 lbs.	12.00

Packed Loose.

APRONS.



BLACKSMITHS'.

OAK SPLIT LEATHER; Made Complete with Brass Eyelets and Leather Strings.

	Per Dozen
No. 2—WITH BIB; 28x38 inches; Weight per dozen about 18 lbs.	\$20.00
No. 4—WITHOUT BIB; 26x33 inches; Weight per dozen about 15 lbs.	17.00

Packed Loose.



STANDARD-MECHANICS'.

7 ounce BROWN DUCK, with Two Nail or Tool Pockets and One Rule Pocket; Half Overall Pattern; Open Back.

	Per Dozen
No. A—STANDARD; Length 34 inches; Width of Bib 10 1/2 inches; Greatest Width 28 inches; Pocket Piece 7x7 inches; Weight per dozen about 6 lbs.	\$7.50

PROSPECTING PICKS.



The Face and Point are Hardened,
Tempered and Thoroughly Tested.

KEEN KUTTER*

Highest Grade Crucible Steel, Adze Eye; Hardened Point and Octagon Poll; Gold Bronzed Body and Eye, Polished Point, Poll and Face; Extra Select Hickory Handle, FASTENED WITH OUR GRELLNER PATENT WEDGE.

KEEN KUTTER*: Handled Prospecting.

Nos.	K1	K2
Weight each, without Handle, ozs.	16	24
Length of Head, inches	7 1/2	8
Length over all, inches	13	13
Weight per dozen about, lbs.	22	24
Per dozen	\$18.00	20.00

One-half Dozen in a Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

PICKS.

KEEN KUTTER®

Soft Steel Body, Adze Eye, with Extra Full Weight Highest Grade Crucible Steel Points, Oil Tempered.



RAILROAD.

KEEN KUTTER®; Axe Finish; Painted Blue, Polished Bit and Point.

Nos.	KR45	KR56	KR67	KR78
Weights Assorted, lbs.	4 to 5	5 to 6	6 to 7	7 to 8
Length over all, inches	23	24	25	26
Weight per doz. about, lbs.	54	66	78	90
Per dozen	\$13.00	14.00	15.00	16.00

Two Dozen in a Case.



DRIFTING.

KEEN KUTTER®; Oil Finish.

Nos.	K02	K03	K04
Weight each, lbs.	4	4½	5
Length over all, inches	22	23	24
Weight per dozen about, lbs.	48	54	60
Per dozen	\$14.00	15.00	16.00

MATTOCKS.

Soft Steel Body, Adze Eye, with Extra Full Weight Highest Grade Crucible Steel Bits and Points, Polished and Tempered; Hatchet Finish, Painted Blue.



No. KL.

Per Dozen

No. KJ—KEEN KUTTER®, JUNIOR, LIGHT SHORT CUTTER; Weight each 4 lbs.; Width of Hoe 3 to 3½ inches; Width of Cutter 2¼ to 2½ inches; Length over all 13¼ to 14 inches; Weight per dozen about 54 lbs.\$16.00

No. KS—KEEN KUTTER®, SHORT CUTTER; Weight each 5½ lbs.; Width of Hoe 4 to 4½ inches; Width of Cutter 3¼ to 3½ inches; Length over all 15¼ to 15½ inches; Weight per dozen about 72 lbs. 16.50

No. KL—KEEN KUTTER®, LONG CUTTER; Weight each 6 lbs.; Width of Hoe 4 to 4½ inches; Width of Cutter 3¼ to 3½ inches; Length over all 17 to 17½ inches; Weight per dozen about 78 lbs. 17.00



Per Dozen

No. KP—KEEN KUTTER®, PICK; Weight each 6 lbs.; Width of Hoe 4 to 4½ inches; Length of Hoe 8¼ to 8½ inches; Length of Pick End 8¼ to 8½ inches; Weight per dozen about 78 lbs.\$17.00

Two Dozen in a Case.

HOES.

KEEN KUTTER®

Soft Steel Body, with Extra Full Weight Highest Grade Crucible Steel Bit, Polished and Tempered; Axe Finish; Painted Blue.

A Good Strong Tool for
Hard Usage.



Nos. K0 to K3.



No. KHH.



No. KPH.

GRUB.

KEEN KUTTER®; Oval Adze Eye.

Nos.	K0	K1	K2
Width of Cutter, inches	3½	3¾	4
Length over all, inches	10½	10¾	11¼
Weight per dozen about, lbs.	36	42	48
Per dozen	\$12.50	13.00	13.50

HAZEL.

Per Dozen

No. KHH—KEEN KUTTER®, ROUND ADZE EYE; Width of Cutter 6 inches; Length over all 8¼ inches; Weight per dozen about 42 lbs.\$16.00

PALMETTO.

No. KPH—KEEN KUTTER®, OVAL ADZE EYE; Width of Cutter 6½ inches; Length over all 13 inches; Weight per dozen about 70 lbs.\$16.00

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BORING MACHINES.



Natural Finish and Varnished Hardwood Base and Uprights; Japanned Cast Iron Arch, Gears and Cranks; Steel Spindle, Chuck and Axle; Hardwood Grips; Frame Firmly Bolted; Steel Measuring Scale on Upright, graduated in $\frac{1}{4}$ inches up to 10 inches.

No. 1—UPRIGHT, WITHOUT AUGERS; Width of Base $7\frac{1}{4}$ inches; Length of Base 2 feet 5 inches; Height of Upright 2 feet; Length of Crank $8\frac{1}{2}$ inches Each \$5.00

No. 1/S—Same as No. 1, WITH AUGERS, one each 1, $1\frac{1}{2}$ and 2 inch Standard Boring Machine Augers 9.50
One in a Crate.
Weight each about 25 lbs.



No. 2—ANGULAR, WITHOUT AUGERS; Cast Iron Swivel and Clamping Frame at Base of Upright; Adjustable for Angular Boring; Width of Base $7\frac{1}{4}$ inches; Length of Base 2 feet 5 inches; Height of Upright 2 feet; Length of Cranks $8\frac{1}{2}$ inches Each \$6.00

No. 2/S—Same as No. 2, WITH AUGERS, one each 1, $1\frac{1}{2}$ and 2 inch Standard Boring Machine Augers 10.50
One in a Crate.
Weight each about 20 lbs.



No. 4—AJAX, ANGULAR, WITHOUT AUGERS; Natural Finish and Varnished Hardwood Base and Upright; Japanned Cast Iron Arch, Gears and Cranks; Steel Measuring Scale on Upright, graduated in $\frac{1}{4}$ inches up to 10 inches; Cranks Adjustable from 6 inches to 12 inches in Length; Chuck holds Augers or Bits with Round or Bit Stock Shank; Cast Iron Swivel and Clamping Frame at Base of Upright, Adjustable for Angular Boring; Width of Base $7\frac{1}{4}$ inches; Length of Base 2 feet 4 inches; Height of Upright 21 inches... Each \$6.50

No. 4/S—Same as No. 4, WITH AUGERS, one each 1, $1\frac{1}{2}$ and 2 inch Standard Boring Machine Augers 11.00
One in a Crate.
Weight each about 40 lbs.

Steel Spindle; Chuck and Axle; Hardwood Grips; Frame Firmly Bolted.



No. 5—BOSS, ANGULAR, WITHOUT AUGERS; Natural Finish and Varnished Hardwood Base; Japanned Cast Iron Frame, Arms Gears and Cranks; Measuring Scale on Upright, graduated in $\frac{1}{4}$ inches up to 8 inches; the Gearing and Gear Frame reversible to change speed when boring with large or small Augers; Frame Adjustable for Angular Boring; Width of Base $10\frac{1}{2}$ inches; Length of Base 21 inches; Height of Upright 22 inches; Length of Cranks $8\frac{1}{2}$ inches..... Each \$6.00

No. 5/S—Same as No. 5, WITH AUGERS, one each 1, $1\frac{1}{2}$ and 2 inch Standard Boring Machine Augers 10.50

One in a Crate.
Weight each about 35 lbs.

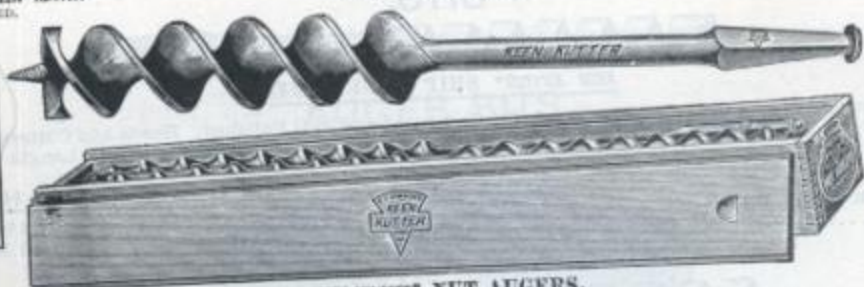


"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SIMMONS
TRADE MARK REGISTERED.

TRADE MARK
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

AUGERS.

Full Polished from Tip to Tip and are subjected to the Most Rigid Inspection.



Each one is Accurately Turned on a Lathe, making them Uniformly Perfect. Head and Cutters are Sharpened by Hand Filing.

KEEN KUTTER® NUT AUGERS.

Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished; Heads and Cutters Sharpened and Finished by Hand.

Size, inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2
Length of Twist, inches	6 $\frac{1}{4}$	6 $\frac{1}{2}$	6 $\frac{3}{4}$	6 $\frac{1}{2}$	7	7	7 $\frac{1}{2}$	8 $\frac{1}{2}$	9
Length over all, inches	15	15	15	15 $\frac{1}{2}$	15 $\frac{1}{2}$	16	17 $\frac{1}{4}$	18 $\frac{1}{2}$	19
Weight per dozen about, lbs.	5 $\frac{1}{2}$	6	8	9	10 $\frac{1}{2}$	13	20	26	28
Per dozen	\$8.25	9.50	10.75	12.00	13.25	17.00	22.00	26.00	30.00

$\frac{1}{2}$ to 1 $\frac{1}{4}$ inch, One-half Dozen; 1 $\frac{1}{2}$ to 2 inch, One-quarter Dozen in a Wood Box.



KEEN KUTTER® SPECIAL BORING MACHINE AUGERS.

Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished; Solid Center; Heads and Cutters Sharpened and Finished by Hand.

Size, inches	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	2
Length of Twist, inches	7 $\frac{1}{2}$	7 $\frac{1}{2}$	8	8	8
Length over all, inches	10 $\frac{3}{4}$	10 $\frac{3}{4}$	11 $\frac{1}{2}$	11 $\frac{1}{2}$	11 $\frac{1}{2}$
Weight per dozen about, lbs.	8	9	12	14	17
Per dozen	\$15.00	19.00	24.00	28.00	32.00

1 and 1 $\frac{1}{4}$ inch, One-half Dozen; 1 $\frac{1}{2}$, 1 $\frac{3}{4}$ and 2 inch, One-third Dozen in a Wood Box.



KEEN KUTTER® SHIP AUGERS, WITH SCREW.

Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished; Heads and Cutters SHARPENED AND FINISHED BY HAND; Single Thread on Screw; Length of Twist about 12 inches; Length over all about 18 inches.

Size, inches	6, 7, 8	9, 10	11, 12	13, 14	15, 16	17, 18	19, 20	21, 22	23, 24	25, 16
Weight per dozen about, lbs.	4 5 6	7 $\frac{1}{2}$ 9 $\frac{1}{2}$	10 11	13 14 $\frac{1}{2}$	16 19	24 25	26 28	31 35	39 43	48
Per dozen	\$7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	21.00	24.00



KEEN KUTTER® SHIP AUGERS, WITHOUT SCREW.

Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished; Heads and Cutters SHARPENED AND FINISHED BY HAND; Length of Twist about 12 inches; Length over all about 18 inches.

Size, inches	6, 7, 8	9, 10	11, 12	13, 14	15, 16	17, 18	19, 20	21, 22	23, 24	25, 16
Weight per dozen about, lbs.	4 5 6	7 $\frac{1}{2}$ 9 $\frac{1}{2}$	10 11	13 14 $\frac{1}{2}$	16 19	24 25	26 28	31 35	39 43	48
Per dozen	\$7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	21.00	24.00

$\frac{6}{16}$ to $\frac{20}{16}$ inch, One-half Dozen; Over $\frac{20}{16}$ inch One-quarter Dozen in a Wood Box.

Made for Fast and Deep Boring. Will not Clog or Choke.

BITS.



KEEN KUTTER* SHIP AUGER BITS.

Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished; Heads and Cutters SHARPENED AND FINISHED BY HAND; Single Thread on Screw; Length of Twist about 4½ inches; Length over all about 8½ inches.

Size, inches	4	5	6	7	8	9	10	11	12	13	14	15	16/16
Weight per dozen about, lbs.	1½	1¾	2	2½	3	3½	4	4½	5½	6	6½	7½	9
Per dozen	\$6.00	6.00	6.00	6.00	6.00	7.50	7.50	9.00	9.00	10.50	10.50	12.00	12.00

One-half Dozen in a Wood Box.



KEEN KUTTER* SHIP CAR BITS.

Will not Clog or Choke when Boring.

Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished; Heads and Cutters SHARPENED AND FINISHED BY HAND; Single Thread on Screw; Length of Twist about 12 inches; Length over all about 18 inches.

Size, inches	4	5	6	7	8	9	10	11	12	13	14	15	16	17/16
Wt. per doz. about, lbs.	3½	4	4½	5	6	7½	9	10	11½	13	14	15	19	21
Per dozen	\$8.50	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	14.00	14.50	15.50



KEEN KUTTER* CAR BITS.

Standard of High Quality.

Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished; Heads and Cutters SHARPENED AND FINISHED BY HAND; Double Extension Lips and Cutters; Double Thread on Screw; Length of Twist about 12 inches; Length over all about 18 inches.

Size, inches	4	5	6	7	8	9	10	11	12	13	14	15	16	17/16
Wt. per doz. about, lbs.	3½	4	4½	5	6	7½	9	10	11½	13	14	15	19	21
Per dozen	\$9.00	9.00	9.00	10.00	11.25	12.50	13.75	15.00	16.25	17.50	19.00	20.50	22.00	24.00



KEEN KUTTER* SPECIAL CAR BITS.

Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished; Double Extension Lips and Cutters; Solid Center; Single Thread on Screw; Heads and Cutters SHARPENED AND FINISHED BY HAND; Length of Twist 12 inches; Length over all 18 inches.

Size, inches	4	5	6	7	8	9	10	11	12	13	14	15	16	17/16
Wt. per doz. about, lbs.	2	2½	3	3½	4	5	5½	6	6½	7½	8	9½	10	11½
Per dozen	\$9.00	9.00	9.00	10.00	11.25	12.50	13.75	15.00	16.25	17.50	19.00	20.50	22.00	24.00

One-half Dozen in a Wood Box.

AUGER BITS.

KEEN KUTTER* SINGLE TWIST.
(Ford Pattern)

Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished; Single Lip and Cutter; Heads and Cutters SHARPENED AND FINISHED BY HAND; Length of Twist about 4½ inches; Length over all about 8½ inches; Suitable for Hard or Soft Wood.

No. KT—KEEN KUTTER* SINGLE TWIST.

No. KT—KEEN KUTTER+ SINGLE TWIST.								
Size, inches	4	5	6	7	8	9	10/16	
Weight per dozen about, lbs.	1	1¼	1½	1¾	2	2¼	2½	
Per dozen	\$4.00	4.00	4.00	4.50	5.00	5.50	6.00	
Size, inches	11	12	13	14	15	16/16		
Weight per dozen about, lbs.	3	3¼	3½	3¾	4	4½		
Per dozen	\$7.00	7.00	8.00	8.00	9.00	9.00		

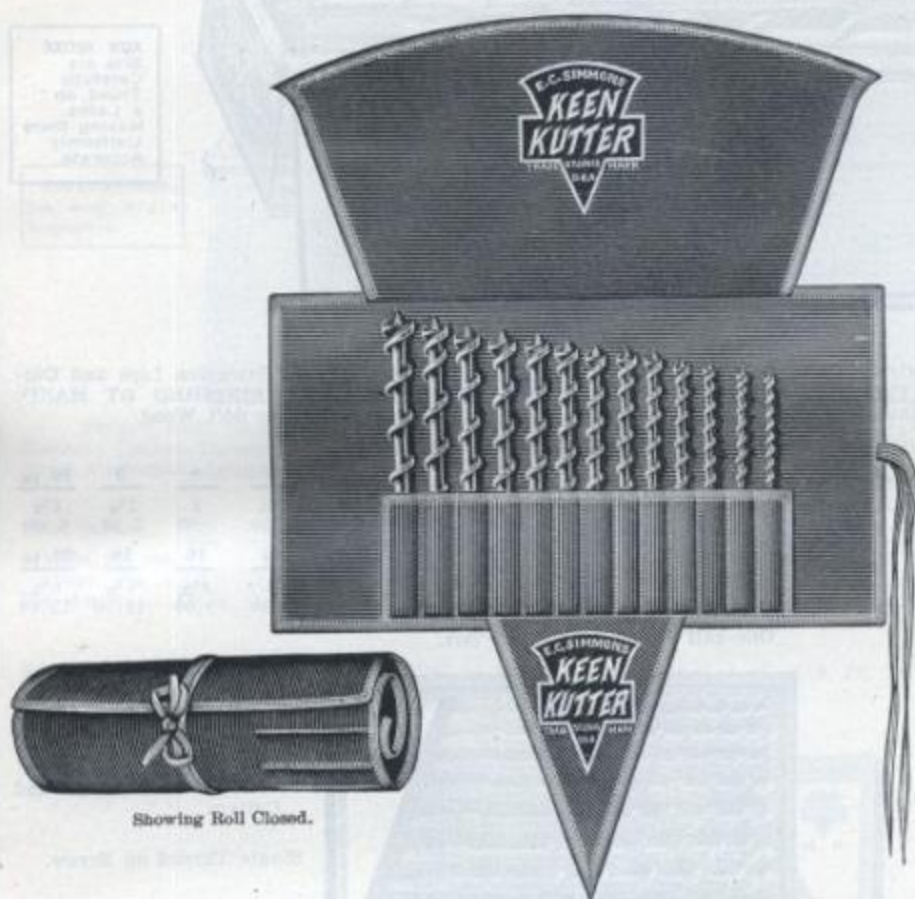
One-half Dozen in a Wood Box.

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TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**
REGISTERED.

AUGER BITS

IN ROLLS.



Showing Roll Closed.

Showing Roll Open.

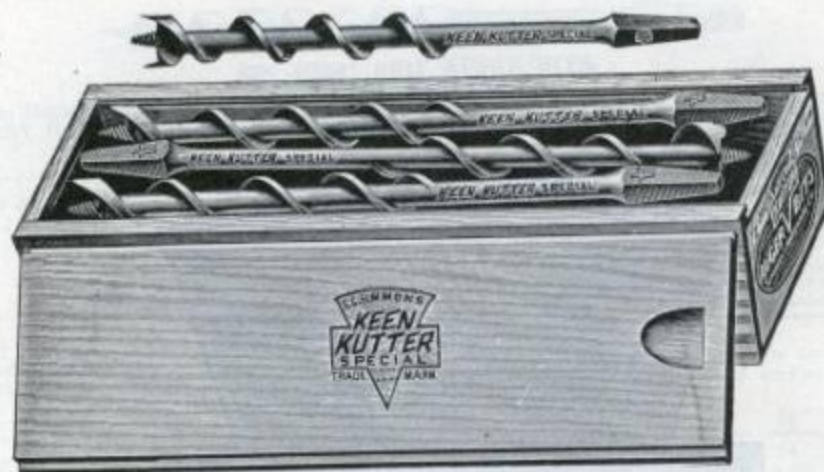
KEEN KUTTER SPECIAL*.

Dimensions of Roll, $11\frac{1}{2}$ inches Long, $3\frac{1}{2}$ inches in Diameter.

- No. KSR9**—Heavy Black Duck Roll, with Red Binding; Complete with 9 **KEEN KUTTER SPECIAL** Auger Bits,
One Each 4, 5, 6, 7, 8, 10, 12, 14 and 16/16; Weight of Roll with Tools about 3 lbs..... \$5.00
- No. KSR13**—Heavy Black Duck Roll, with Red Binding; Complete with 13 **KEEN KUTTER SPECIAL** Auger Bits,
One Each 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16/16; Weight of Roll with Tools about 4 lbs... 8.00

Packed Loose.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

AUGER BITS.

KEEN KUTTER
Bits are
Carefully
Trued on
a Lathe,
Making them
Uniformly
Accurate.

KEEN KUTTER* SPECIAL.

Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished; Double Extension Lips and Cutters; Solid Center; Single Thread on Screw; Heads and Cutters SHARPENED AND FINISHED BY HAND; Length of Twist about $4\frac{1}{2}$ inches; Length over all about $8\frac{1}{2}$ inches; Suitable for Hard or Soft Wood.

No. KS—KEEN KUTTER* SPECIAL.

Size, inches	3	4	5	6	7	8	9	10/16
Weight per dozen about, lbs.	$3\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$
Per dozen	\$4.50	4.00	4.00	4.00	4.50	5.00	5.50	6.00
Size, inches	11	12	13	14	15	16	18	20/16
Weight per dozen about, lbs.	3	$3\frac{3}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$	4	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$
Per dozen	\$7.00	7.00	\$8.00	8.00	9.00	9.00	10.50	12.00

One-half Dozen in a Wood Box.

Forged from Highest Grade
Crucible Steel.

Oil Tempered.

Full Polished.

Solid Center.



Double Extension Lips and
Cutters.

Single Thread on Screw.

Heads and Cutters SHARP-
ENED AND FINISHED
BY HAND FILING.

Suitable for Hard or Soft
Wood.

No. KS/13.

KEEN KUTTER* SPECIAL; In Sets.

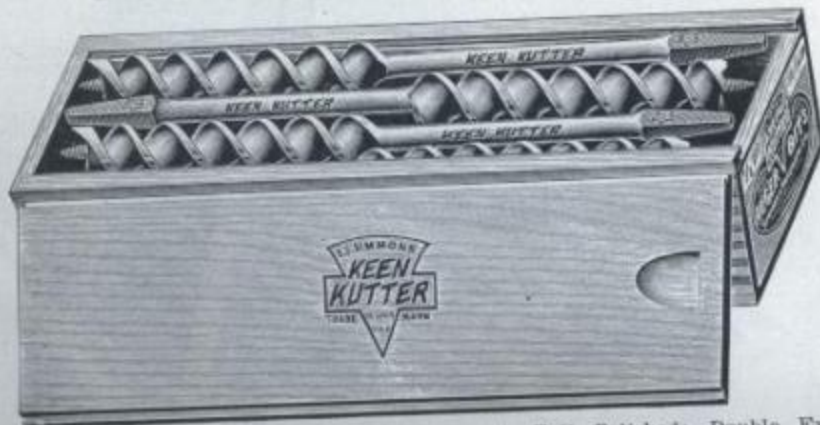
In Varnished Hardwood Boxes.

	Per Set
No. KS/9 —IN SETS OF $20\frac{1}{2}$ QUARTERS, 9 BITS; One each 4, 5, 6, 7, 8, 10, 12, 14, $16\frac{1}{16}$; Weight per Set about $4\frac{1}{2}$ lbs.	\$4.40
No. KS/13 —IN SETS OF $32\frac{1}{2}$ QUARTERS, 13 BITS; One each 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, $16\frac{1}{16}$; Weight per Set about 6 lbs.	7.00

One Set in a Varnished Hardwood Box.

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TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**.
REGISTERED.

AUGER BITS.**KEEN KUTTER®**

Are subjected to
the most Rigid
inspection.

Each Bit is ac-
curately turned
on a lathe making
them uniformly
perfect.

Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished; Double Extension Lips and Cutters; Double Thread on Screw; Heads and Cutters SHARPENED AND FINISHED BY HAND; Length of Twist about $4\frac{1}{2}$ inches; Length over all about $8\frac{1}{2}$ inches.

	No. K—KEEN KUTTER.*															
Size, inches...	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20/16
Weight, per doz., about, lbs...	1	1½	1½	1½	2	2½	2½	3	3½	3½	4½	5	5½	5½	6½	7½
Per dozen.....	\$4.50	4.00	4.00	4.00	4.50	5.00	5.50	6.00	7.00	7.00	8.00	8.00	9.00	9.00	10.50	12.00

One-half Dozen in a Wood Box.

No. K/13—IN SETS OF $32\frac{1}{2}$ QUARTERS; 13 BITS; one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, $16/16$; Per Set
Weight per set about $3\frac{1}{2}$ lbs..... \$7.00
One Set in a Wood Box.

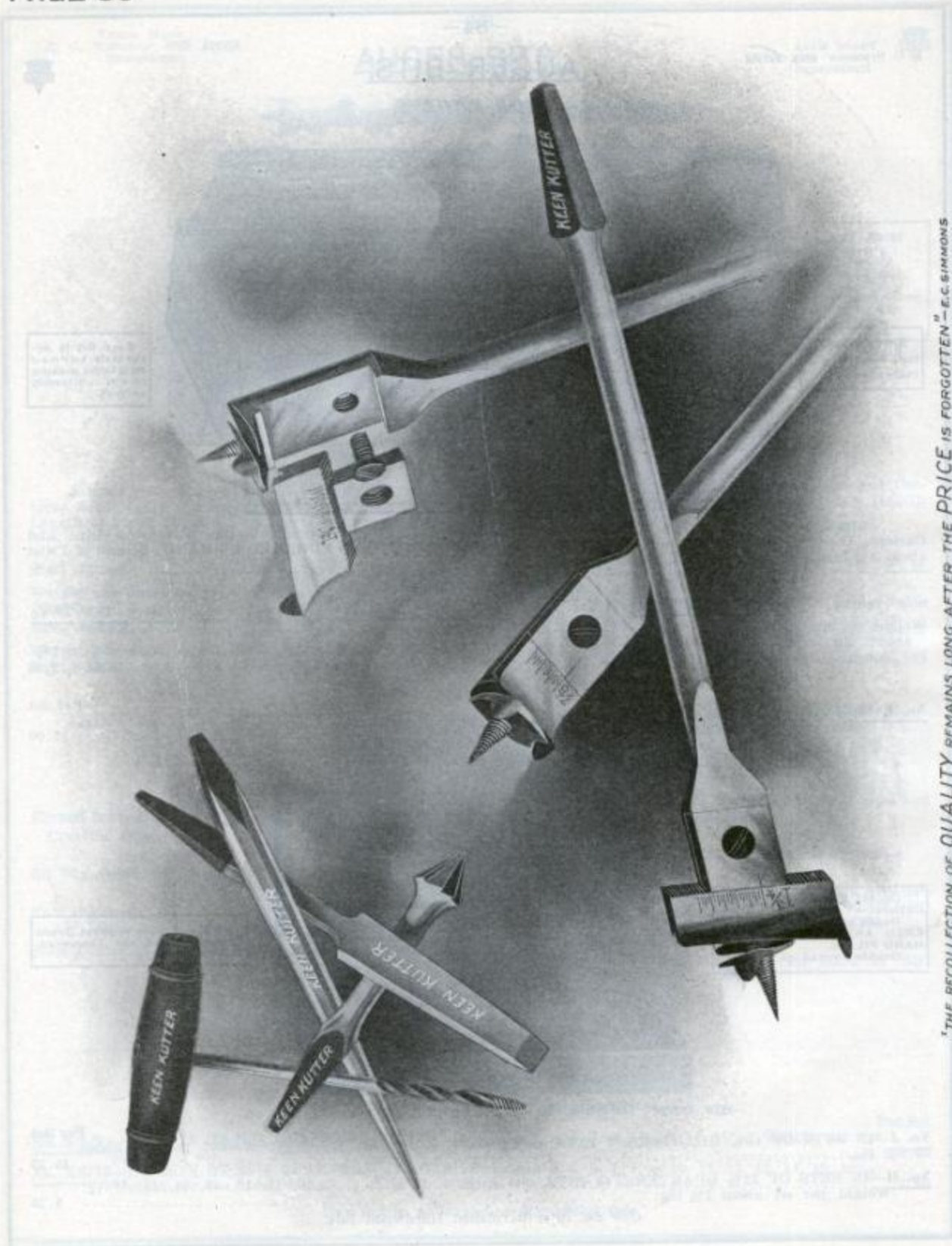
Double Extension Lips and
Cutters.
Heads and Cutters SHARP-
ENED AND FINISHED BY
HAND FILING.
Double Thread on Screw.



Forged from Highest Grade
Crucible Steel, Oil Tempered,
Full Polished.

KEEN KUTTER® in Sets, in Varnished Hardwood Boxes.

No. J—IN SETS OF $15\frac{1}{4}$ QUARTERS, 7 BITS, one each, 4, 5, 6, 8, 10, 12, $16/16$; Weight per set about
2 lbs..... \$5.25
No. H—IN SETS OF $32\frac{1}{2}$ QUARTERS, 13 BITS, one each, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, $16/16$;
Weight per set about $3\frac{1}{2}$ lbs..... \$8.25
One Set in a Varnished Hardwood Box.



THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN—E.C. SIMMONS
TRADE MARK REGISTERED.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**
REGISTERED.

AUGER BITS.



Forged from Tool Steel; Polished Shanks and Squares, with Blued Heads; Length over all ranges from 6 to 8 inches on the different sizes.

No. F—FORSTNER'S.

Size, inches	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
Weight per dozen about, lbs.	1 1/4	1 1/2	1 3/4	1 3/4	1 3/4	1 3/4	2	2 1/4	2 1/2	2 1/2	2 3/4	2 3/4
Per dozen	\$7.80	7.80	8.40	8.40	9.00	9.00	9.60	9.60	10.20	10.20	10.80	12.00

Size, inches	1	1 1/16	1 1/8	1 3/16	1 1/4	1 5/16	1 3/8	1 7/16	1 1/2	1 5/8	1 3/4	1 7/8	2
Weight per dozen about, lbs.	3	3 1/4	3 1/2	3 1/2	3 3/4	3 3/4	4	4	5	5 1/4	6 1/2	7 1/2	10 3/4
Per dozen	\$12.60	12.60	13.20	13.20	15.00	15.00	16.20	21.00	24.00	27.00	30.00	33.00	36.00

1/4 to 1 7/16 inch One Dozen in a Cardboard Box; 1 1/2 to 2 inch Packed Loose.

EXPANSIVE BITS.



Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished; Single Thread on Screw; Clamps and Cutters are Notched on Edges, which Prevents the Cutter from Slipping; Heads and Cutters SHARPENED AND FINISHED BY HAND.

No. KK/S—KEEN KUTTER*, SMALL SIZE: Complete with Cutters Nos. 1 and 2; Cuts from 1/8 to 1 1/4 inch Hole; Length over all 8 inches; Weight per dozen about 4 lbs. Per Dozen \$22.00

No. KK/L—KEEN KUTTER*, LARGE SIZE: Complete with Cutters Nos. 3 and 4; Cuts from 1/2 to 3 inch Hole; (No. 5 Cutter can be used with this Size only); Length over all 9 3/4 inches; Weight per dozen about 7 lbs. 26.00

One-twelfth Dozen in a Wood Box.

Extra Cutters for KEEN KUTTER* Expansive Bits.

Nos.	1	2	3	4	5
Cuts from, inches	1/8 to 1 1/4	1 1/8 to 1 3/4	3/8 to 1 1/2	1 1/4 to 3	3 to 4
Per dozen	\$3.00	3.75	5.25	6.00	12.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 1/2 lb.

DOWEL BITS.



No. RJD—RUSSELL JENNINGS.

Solid Cast Steel, Polished; Length over all 3 inches.

Size, inches	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8
Weight per dozen about, lbs.	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2
Per dozen	\$3.40	3.40	3.40	3.40	3.40	3.80	3.80	4.40	4.40	4.80	4.80

Size, inches	8	8 1/2	9	10	11	12	13	14	15	16	18
Weight per dozen about, lbs.	1	1	1	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Per dozen	\$4.80	5.20	5.20	5.60	6.10	6.60	7.20	7.80	8.40	9.00	9.00

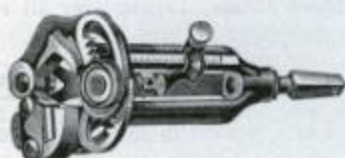
One Dozen in a Wood Box.

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MADE IN U.S.A.
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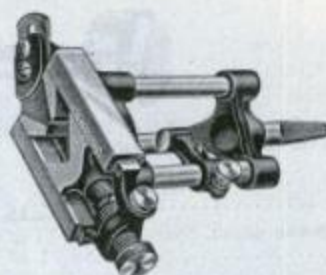


EXPANSIVE HOLLOW AUGERS.



No. 3—STEARNS' PATTERN; WITHOUT AUGER BITS; Japanned Cast Iron Frame; Nickel Plated Face and Adjustment Screws; Adjustable Depth Gauge; Tempered Tool Steel Adjustable Blade; Bit Stock Shank to fit Brace; Cuts from $\frac{1}{4}$ to $1\frac{1}{4}$ inches any length up to $3\frac{1}{4}$ inches; Length over all $6\frac{1}{2}$ inches; Weight per dozen about 16 lbs.\$60.00
One-sixth Dozen in a Wood Box.

Per Dozen



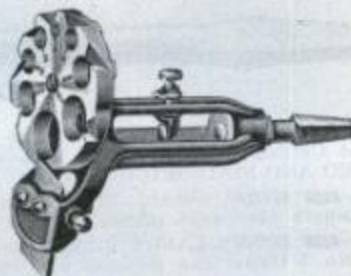
No. B1—WOOD'S UNIVERSAL; WITHOUT AUGER BITS; Made entirely of Steel; Hardened Screws; Two Tempered Tool Steel Adjustable Blades; Adjustable Depth Gauge; Bit Stock Shank to fit Brace; Cuts from $\frac{1}{4}$ to $1\frac{1}{4}$ inches any length up to 4 inches; Length over all $6\frac{1}{4}$ inches; Weight per dozen about 20 lbs\$54.00
One in a Cardboard Box.

Per Dozen



No. IH—IVES'; WITHOUT AUGER BITS; Japanned, Cast Iron Frame; Polished Face; Steel Adjusting Screws; Adjustable Depth Gauge; Double Cutters; Tempered Tool Steel Adjustable Blades; Bit Stock Shank to fit Brace; Cuts from $\frac{1}{2}$ to $1\frac{1}{2}$ inches any length up to $3\frac{1}{4}$ inches; Length over all $5\frac{1}{4}$ inches; Weight per dozen about 16 lbs.\$51.00
One-sixth Dozen in a Wood Box.

Per Dozen



No. 10—BONNEY'S; WITHOUT AUGER BITS; Japanned Cast Iron Frame; Nickel Plated Cast Iron Sizing Plate; Adjustable Depth Gauge; Tempered Tool Steel Adjustable Blade; Bit Stock Shank to fit Brace; Cuts from $\frac{3}{8}$ to 1 inch any length up to $3\frac{1}{4}$ inches; Length over all $6\frac{1}{4}$ inches; Weight per dozen about 19 lbs.\$48.00
One-sixth Dozen in a Cardboard Box.

Per Dozen

SPOKE TENONING MACHINES.



Fellow Boring Attachment.



No. P—PEACE'S; with Fellow Boring Attachment and Adjustable Hollow Auger; Japanned Cast Iron Frame, Chuck, Crank and Clamp; Polished Steel Spindle, Shank and Cutter Face; Tempered Tool Steel Blade; Steel Set Screws; Cuts Tenons from $\frac{1}{4}$ to $1\frac{1}{4}$ inches any Length to $3\frac{1}{4}$ inches; Length over all 20 inches; Weight each about 14 lbs.\$15.00
One in a Wood Box.

Each

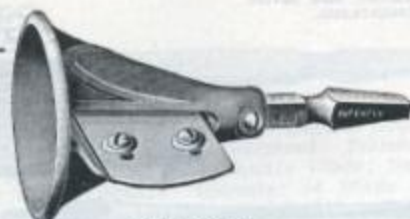
POINTERS.



SPOKE.

No. 2—IVES'; Japanned Cast Iron Socket and Shank; Tempered Steel Adjustable Blade; Bit Stock Shank to fit Brace; Cuts Points from $\frac{3}{8}$ to $1\frac{1}{2}$ inches; Length over all $4\frac{1}{4}$ inches; Weight, per dozen about 6 lbs.\$12.00

Per Dozen



SPOKE.

No. 1—STEARN'S PATTERN; Japanned, Cast Iron Socket and Shank; Tempered Steel Adjustable Blade; Adjustable Bit Stock Shank to fit Brace; Cuts Points to $1\frac{1}{4}$ inches; Length over all, when Shank is extended, 6 inches; Weight per dozen about 8 lbs.\$9.00

Per Dozen



SPOKE.

No. E1—WOOD'S; Japanned Cast Steel Socket and Shank; Tempered Steel Adjustable Blade; Bit Stock Shank to fit Brace; Cuts Points from $\frac{1}{4}$ to 2 inches; Length over all 4 inches; Weight per dozen about 6 lbs.\$9.00

Per Dozen



DOWEL.

No. 1D—Japanned Cast Iron Socket and Shank; Tempered Steel Adjustable Blade; Bit Stock Shank to fit Brace; Cuts Points up to $\frac{3}{4}$ inch; Length over all $2\frac{1}{4}$ inches; Weight per dozen about $1\frac{1}{4}$ lbs.\$4.50

Per Dozen

One-half Dozen in a Cardboard Box.

DRILL BITS.



STYLE A—SYRACUSE BIT STOCK; FOR WOOD.

Forged from Tool Steel, Oil Tempered, Polished Twist and Shank, Natural Finish Square; Average Length of Twist 3 inches; Average Length over all 6 inches.

Size, inches	3	4	5	6	7	8	9	10/32
Weight per dozen about, lbs.	1.60	1.60	1.75	2.00	2.50	3.00	3.50	3.50
Per dozen	11	12	13	14	15	16	17	18/32
Size, inches	1 1/2	2	2 1/4	2 1/2	2 3/4	3	3 1/4	
Weight per dozen about, lbs.	4.00	4.00	4.50	4.50	5.00	5.00	5.50	5.50
Per dozen	13/32 to 12/32, One Dozen; 13/32 and Larger, One-half Dozen in a Wood Box.							



No. 16—STYLE A—SYRACUSE BIT STOCK; FOR WOOD; IN SETS; One each 3, 4, 5, 6, 7, 8, 9, 10 and 12/32 inches; In Polished Hardwood Box with Cover, 6 inches High, 2 1/4 inches in Diameter; Weight per set about $1\frac{1}{4}$ lbs.\$1.75

Per Set

No. 23—STYLE A—SYRACUSE BIT STOCK; FOR WOOD; IN SETS, One each 4, 5, 6, 7, 8, 10 and 12/32 inches; In Imitation Morocco Covered Wood Case with Cover 8 1/4 inches Long, 2 1/2 inches Wide, 3/4 inch Thick; Weight per set about 1 lb.\$1.75

Per Set



One Set in a Wood Case.

STYLE E—SYRACUSE; ELECTRICIANS' AND BELL HANGERS.

Forged from Tool Steel, Oil Tempered, Polished Twist and Shank, Natural Finish Square; Average Length of Twist 6 inches; Average Length over all 24 inches.

Size, inches	8	10	12	16	20/32
Weight per dozen about, lbs.	9.00	9.50	10.00	12.00	14.00
Per dozen	8/32 to 12/32, One Dozen; 16/32 and 20/32, One-half Dozen in a Wood Box.				

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

GIMLET BITS.



Forged from Highest Grade Crucible Steel, Oil Tempered, Polished and Straw Color Finish Blade; Natural Finish Square; Average Length over all 5 inches.

KEEN KUTTER*; GERMAN PATTERN.

Inches	2	3	4	5	6	7/32
Per dozen	\$1.80	1.80	1.80	1.80	1.80	1.80
Inches	8	9	10	11	12/32	
Per dozen	\$1.80	2.00	2.00	2.25	2.25	

No. K5—KEEN KUTTER*; ONE DOZEN Assorted from 4 to 8/32.....\$1.80

No. K7—KEEN KUTTER*; ONE DOZEN Assorted from 6 to 12/32.....2.00

One Dozen in a Wood Box. Weight per Dozen about 1 lb.

KEEN KUTTER*; DOUBLE CUT.

Nos.	200	201	202	203	204	205	206
Inches	4	5	6	7	8	9	10/32
Per dozen	\$1.50	1.65	1.80	2.00	2.20	2.35	2.50

Per Dozen

No. K06—KEEN KUTTER*; ONE DOZEN Assorted Nos. 200 to 206\$2.10

GIMLETS.



Perfectly Ground and have Clean, Sharp Cutting Edges; Fitted with Strong Rosewood Handles.

No. 1.

No. 2.

No. 3.

No. 4.

Cuts Showing Exact Sizes.

Per Gross

No. 250—KEEN KUTTER*, DOUBLE CUT; Blade Forged from Highest Grade Crucible Steel, Oil Tempered, Polished and Straw Colored Finish; Polished Rosewood Handle; Blade extends through Handle and Riveted at Top. Average Length of Handle 2 1/4 inches; Average Length of Blade 3 1/2 inches; Assorted Sizes, Nos. 1, 2, 3 and 4. Weight per gross about 8 lbs.....\$18.00

One-twelfth Gross in a Wood Box.

Per Gross

No. 300—KEEN KUTTER*, DIAMOND POINT; Blade Forged from Highest Grade Crucible Steel, Oil Tempered, Polished and Straw Colored Finish; Polished Rosewood Handle; Blade extends through Handle and Riveted at Top. Average Length of Handle 2 1/4 inches; Average Length of Blade 3 1/2 inches; Assorted Sizes, 3/16, 4/16, 5/16 inch; Weight per gross about 8 lbs.....\$20.00

SCREW DRIVER BITS.



Per Dozen

No. 103—KEEN KUTTER BLUE BRAND*; Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished and Blued; Shoulder near Point, Strengthens Bit; Points, Assorted Widths, 5/16 to 1/2 inch; Average Length about 3 1/2 inches; Weight per dozen about 1 lb.....\$3.00

One Dozen in a Wood Box.



Per Dozen

No. 102—KEEN KUTTER*; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Straw Color Blade and Shank; Natural Finish Square; Points, Assorted Widths, 5/16 to 1/2 inch; Average Length about 4 1/2 inches; Weight per dozen about 1 1/2 lbs.\$2.50

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

REAMER BITS.



OCTAGON.

Per Dozen

- No. 117—KEEN KUTTER*; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished and Straw Color Finish Octagon Blade; Natural Finish Square; Diameter of Blade at Shank $\frac{7}{16}$ inch; Length over all $6\frac{1}{4}$ inches; Weight per dozen about $1\frac{1}{2}$ lbs. \$3.00
One Dozen in a Wood Box.



SQUARE.

Per Dozen

- No. 115—KEEN KUTTER*; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished and Straw Color Finish Square Blade; Natural Finish Square; Diameter of Blade at Shank $\frac{3}{8}$ inch; Length over all $5\frac{1}{4}$ inches; Weight per dozen about $1\frac{1}{2}$ lbs. \$3.00
One Dozen in a Wood Box.

COUNTERSINK BITS.

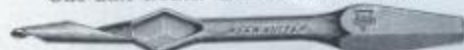


KEEN KUTTER*; FOR WOOD.

Drop Forged from Best Tool Steel, Tempered and Polished; DOUBLE LIP; Can be Re-sharpened from the Inside with a file; Length over all $4\frac{1}{2}$ inches.

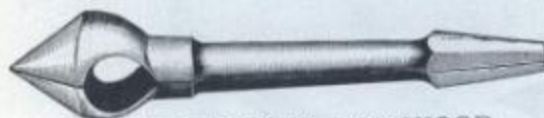
Per Dozen

- No. K120—KEEN KUTTER*, $\frac{5}{8}$ INCH; Weight per dozen about 1 lb. \$3.20
No. K125—KEEN KUTTER*, $\frac{7}{8}$ INCH; Weight per dozen about $1\frac{1}{4}$ lbs. 3.60
One-half Dozen in a Cardboard Box.



Per Dozen

- No. 118—KEEN KUTTER*; GIMLET POINT; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Straw Color Blade; Natural Finish Square; Length over all about 5 inches; Assorted to Cut Holes for Screws from 1 to 2 inches; Average sizes; Weight per dozen about 1 lb. \$3.00
One Dozen in a Wood Box.



CLARK'S PATTERN, FOR WOOD.

Per Dozen

- No. C—DOUBLE CUT; Cuts $\frac{3}{8}$ inch Countersinks; Forged from Tool Steel, Oil Tempered and Polished; Can be Opened for Sharpening by removing a Screw; Length over all $4\frac{1}{2}$ inches; Weight per dozen about $2\frac{1}{4}$ lbs. \$4.00



ROSE HEAD FOR METAL.

Per Dozen

- No. 113—KEEN KUTTER*; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Bit and Shank; Natural Finish Square; Length over all about 4 inches; Cuts Countersinks up to $\frac{1}{2}$ inch in Diameter; Weight per dozen about $1\frac{1}{4}$ lbs. \$3.25
One Dozen in a Wood Box.



SNAIL HEAD FOR WOOD.

Per Dozen

- No. 114—KEEN KUTTER*; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Bit and Shank; Natural Finish Square; Length over all about 4 inches; Cuts Countersinks up to $\frac{1}{2}$ inch in Diameter; Weight per dozen about $1\frac{1}{4}$ lbs. \$2.50
One Dozen in a Wood Box.



WHEELER PATENT, FOR WOOD.

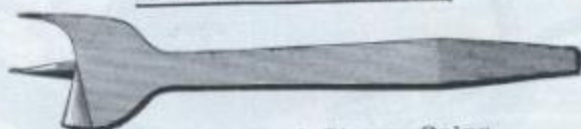
Forged from Tool Steel, Oil Tempered; Polished Cutter and Shank; Natural Finish Square; Average Width of Bit about $\frac{1}{2}$ inch; Length over all 4 inches; Cuts Countersinks up to $\frac{1}{2}$ inch in Diameter.

Per Dozen

- No. 2—WITH DEPTH GAUGE; Weight per dozen about 2 lbs. \$4.50
No. 1—WITHOUT DEPTH GAUGE; Weight per dozen about $1\frac{1}{4}$ lbs. 3.00

One-half Dozen in a Cardboard Box.

CENTER BITS.



No. 25—Cast Steel Straw Color.

Size inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$
Weight per dozen about, lbs.	.75	.75	.75	.75	.75	.75	.75	.75	1.00
Per dozen	\$0.75	1.14	1.14	1.14	1.14	1.14	1.14	1.14	2
Size inches									
Weight per dozen about, lbs.		2	2	2 1/2	2 1/2	3 1/4	3 1/4	3 1/2	3 1/2
Per dozen		\$1.20	1.40	1.60	1.90	2.10	2.30	2.50	

$\frac{1}{4}$ to $1\frac{1}{2}$ inches, One Dozen, $1\frac{1}{4}$ to 2 inches, One-half Dozen in a Cardboard Box.



THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN - E.C. SIMMONS

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TRADE MARK
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

BIT BRACES.

Ball Bearings, Patent
Jaw-Retaining Chuck,
Covered Ratchet, Fine
Finish.



View of Head Showing Ball Bearings.



View of Head Showing Ball Bearings.

KEEN KUTTER*, NICKEL PLATED.

Ball Bearing Head; Highest Grade Bent Steel Shank; Full Nickel Plated Finish; Patent Jaw-retaining Chuck; Case Hardened Alligator Pattern Toothed Separate Jaws, 2½ inches Long; Select Genuine Ebony Head and Handle; Head Mounted on Nickel Plated Steel Cap.

PLAIN.

Nos.	KP6	KP8	KP10	KP12
Sweep, inches	6	8	10	12
Diameter of Shank, inches	¾	7/16	7/16	¾
Length over all, inches	13½	14	14½	14½
Weight per dozen about, lbs.	20	26	29	32
Per dozen	\$26.00	32.00	38.00	44.00

One-fourth Dozen in a Cardboard Box.

RATCHET.

With Ratchet Covered by Nickel Plated Shield; Steel Anti-Friction Washer Between Chuck and Frame.

Nos.	KR6	KR8	KR10	KR12	KR14	KR16
Sweep, in.	6	8	10	12	14	16
Diam. of Shank, in.	¾	7/16	7/16	¾	¾	¾
Length over all, in.	12½	13½	14	15	15½	15½
Weight per doz. lbs.	27	30	34	36	38	45
Per dozen	\$38.00	44.00	50.00	56.00	62.00	68.00

For Extra Jaws for "KEEN KUTTER" and "KEEN KUTTER Blue Brand" Bit and Corner Braces, See No. TD, Page 95.



KEEN KUTTER*, NICKEL PLATED, WITH BALL BEARING CHUCK.

Ball Bearing Head and Patent Ball Bearing Chuck; Highest Grade Bent Steel Shank; Full Nickel Plated Finish; Case Hardened Alligator Pattern Toothed Jaws 2½ inches Long, Joined by Steel Spring; Select Genuine Ebony Head and Handle; Head Mounted on Nickel Plated Steel Cap; Ratchet covered by Nickel Plated Shield.

RATCHET BIT.

Nos.	KBC10	KBC12	KBC14
Sweep, inches	10	12	14
Diameter Shank, inches	¾	9/16	9/16
Length over all, inches	14	15	15½
Weight per dozen about, lbs.	36	38	40
Per dozen	\$60.00	66.00	72.00

One-fourth Dozen in a Cardboard Box.

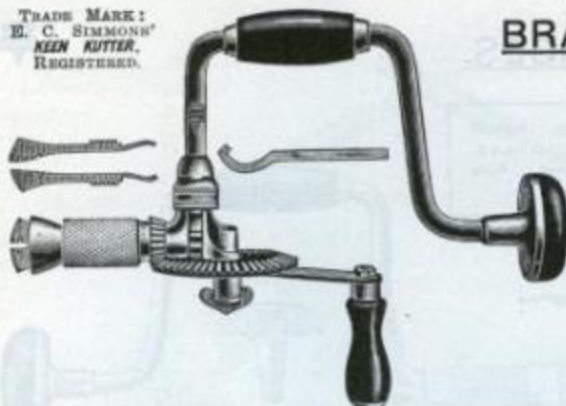


Cut Showing Ball Bearing Chuck No. KBC10.

The Chuck or Bit-holding Device (see Illustration) consists principally of a Socket, Sleeve, Binder, Ball-Retaining Ring and the Hardened Steel Jaws; the Ratchet is formed at one end of the Socket, the outer end made heavier than usual to resist the extra strain caused by the Ball Bearing at the end of the Sleeve, which enables the operator to exert greater power in closing the Jaws onto a bit or drill. These Jaws are specially formed to take round Shank Drills from 1/16 to about ½ inch, as well as square Shank Bits. At the end of the Sleeve is a Steel Washer, next to which are shown the Balls, which, with the Recessed Ring, threaded to prevent any possibility of Shifting laterally, and kept from turning by a Small Screw, forms the Ball Bearing Sleeve device. Should it become necessary at any time to renew the Jaws, first remove the Socket from the Ratchet Frame; take out the Small Screw in the Recessed Ball-Retaining Ring, which can then be unscrewed from the Socket; care being taken not to lose the balls therein. This will leave the Sleeve free to be taken from the Binder and Socket, when both Jaws and Binder may be removed.

BRACES.

TRADE MARK:
E. C. SIMMONS
KEEN KUTTER,
REGISTERED.



KEEN KUTTER*, NICKEL PLATED, RATCHET DRILL.

Ball Bearing Head Mounted on Steel Cap; Highest Grade Bent Steel Shank, Full Nickel Plated Finish; Select Genuine Ebony Head and Handles; Ratchet Covered with Steel Shield; Cast Gear Wheel, 4 inches in Diameter, with Deep Cut Teeth; Crank 4 1/2 inches Long.

Per Dozen

No. KD10—KEEN KUTTER*; Nickel Plated; Sweep 10 inches; Diameter of Shank 7/16 inch; Length over all 14 1/4 inches; Furnished with a Patent Sleeve Wrench to be used for Tightening or Loosening the Jaws; to utilize as a regular Ratchet Brace detach the Gear Wheel; Weight per dozen about 62 lbs.....\$50.00

One-twelfth Dozen in a Cardboard Box.

EXTRA JAWS.

Per Pair

No. TD—ALLIGATOR PATTERN; Forged Steel, Case Hardened, Toothed Separate Jaws; Nickel Plated Finish, with Springs, for KEEN KUTTER Ratchet Drill Braces, KEEN KUTTER and KEEN KUTTER Blue Brand Bit and Corner Braces; Weight per pair about 1 1/2 ozs.....\$0.75

Packed Loose.



No. K300.

KEEN KUTTER*, NICKEL PLATED, BEVEL GEAR CORNER.

Plain Bearing; Highest Grade Bent Steel Shank, Nickel Plated Finish, with Nickel Plated Patent Jaw-Retaining Chuck; Case Hardened Alligator Pattern Toothed Separate Jaws 2 1/2 inches Long; Head Mounted on Nickel Plated Steel Cap; Select Genuine Ebony Head and Handles; Concealed, Wrought Steel, Beveled, Anti-Friction Gears.



NOTE.

No. K400—Corner Ratchets are Designed for use in Cramped Positions not Admitting of Ordinary Braces.

Between the Head and Ratchet Frame, is placed a Knurled Collar marked "A" on Cut; the use of this is to assist in starting a bit previous to its entering the wood sufficiently so that the friction thereof shall hold it from turning back while the handle is turned to take a fresh hold on the Ratchet.

KEEN KUTTER*, NICKEL PLATED, RATCHET CORNER.

Plain Bearing; Highest Grade Steel Shank; Nickel Plated Finish, with Patent Jaw-Retaining Chuck; Case Hardened, Alligator Pattern Toothed Separate Jaws 2 1/2 inches Long; Select Genuine Ebony Head and Handle 5 1/2 inches Long, with Nickel Plated Ferrule; Ratchet Covered with Steel Shield; Knurled Steel Starting Washer; Steel Anti-Friction Washer between Chuck and Frame.

Per Dozen

No. K400—KEEN KUTTER*; Nickel Plated; Height over all 7 3/4 inches; Length over all 9 1/4 inches; Weight per dozen about 28 lbs.....\$36.00

One-Sixth Dozen in a Cardboard Box.

Nos.	K200	K300
Sweep, inches	8	10
Diameter of Shank, inches	7/16	7/16
Width, inches	10 3/4	11 1/2
Length over all, inches	18 1/2	18 1/2
Weight per dozen about, lbs.	48	52
Per dozen	\$66.00	72.00

One-sixth Dozen in a Cardboard Box.

TRADE MARK:
"SURE GRIP"
REGISTERED.



No. N8.

BIT BRACES.

SURE GRIP*.



No. N110.

Special Bent Steel, Polished Shank; Regular Pattern Chuck, with Malleable Iron Alligator Pattern Jaws $2\frac{1}{2}$ inches Long, Joined by a Pin; Polished Maplewood Head and Handle; Brass Ferrule on Head.

PLAIN BIT.

Nos.	N8	N10	N12
Sweep, inches	8	10	12
Diameter of Shank, inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$
Length over all, inches	13 $\frac{1}{4}$	14	14 $\frac{1}{2}$
Weight, per dozen about, lbs.	17	18 $\frac{1}{2}$	22
Per dozen	\$12.00	13.00	14.00

RATCHET BIT.

With Ratchet Covered by Polished Shield.

Nos.	N108	N110	N112
Sweep, inches	8	10	12
Diameter of Shank, inches	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
Length over all, inches	13	13 $\frac{1}{4}$	14 $\frac{1}{2}$
Weight per dozen about, lbs.	23	25	28
Per dozen	\$24.00	26.00	28.00



No. N208.

SURE GRIP*.



No. N308.

Special Bent Steel Shank; Regular Pattern Chuck, with Malleable Iron Alligator Pattern Jaws $2\frac{1}{2}$ inches Long, Joined by a Pin.

PLAIN BIT.

Polished; with Ebonized Hardwood Head and Handle.

Nos.	N208	N210	N212
Sweep, inches	8	10	12
Diameter of Shank, inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$
Length over all, inches	13	13 $\frac{1}{4}$	14 $\frac{1}{2}$
Weight per dozen about, lbs.	19	21	24
Per dozen	\$14.00	15.00	17.00

RATCHET BIT.

Polished; with Ebonized Hardwood Head and Handle; Ratchet Covered by Polished Shield.

Nos.	N308	N310	N312
Sweep, inches	8	10	12
Diameter of Shank, inches	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
Length over all, inches	12 $\frac{1}{2}$	13 $\frac{1}{4}$	13 $\frac{1}{2}$
Weight per dozen about, lbs.	24	26	28
Per dozen	\$28.00	30.00	34.00

One-half Dozen in a Cardboard Box.

EXTRA JAWS.

No. M—Malleable Iron; Alligator Pattern Jaws $2\frac{1}{2}$ inches Long; For Sure Grip Plain and Ratchet Bit Braces; Weight per pair about 1 $\frac{1}{2}$ ozs. Per Pair
Packed Loose. \$0.50



SPOFFORD.

Nickel Plated Bent Steel Shank; Malleable Iron Chuck; Cocobolo Head and Handle.

Nos.	107	108	110	112	114
Sweep, inches	7	8	10	12	14
Weight per dozen about, lbs.	16 $\frac{1}{2}$	19	23	28	34
Per dozen	\$21.00	24.00	27.00	30.00	33.00

One-half Dozen in a Cardboard Box.

TRADE MARKS:
B. C. SIMMONS' KEEN KUTTER;
CHIPAWAY,
REGISTERED.

CHAIN DRILLING ATTACHMENTS.



Inter-
change-
able Split
Collets.



For Round Shank Drills.

For Square Shank Drills.

The Automatic Feed on the KEEN KUTTER Drilling Attachment is Obtained by two Encased Cut Steel Differential Gear Wheels, Communicating the Movement of the Shank and Chuck to the Threaded Body which Feeds the Chain-Yoke. Feed is Regulated by an Adjustable Knurled Head Steel Spring Plunger and Nickel Plated Washer.

By Disengaging the Plunger, the Automatic Feed Ceases and the Yoke may be Quickly Screwed by Hand back to the Starting Position near the Chuck.

KEEN KUTTER*

Each

No. K—KEEN KUTTER*: Automatic Differential Geared Feed; Highest Grade Steel Shank; Deep Cut Close-Threaded Body and Patent Chuck. Chuck and Shank Nickel Plated; Japanned Malleable Iron Feed-Gear Casing and Yoke, with 30 inch Heavy American Pattern Bright Steel Chain; Chuck has Two Collets; One to Accommodate 1/2 inch Round Shank Drills; The Other to Hold Square Shank or Bl. Stock Drills; Length over all 9 inches; Weight per dozen about 32 lbs. \$5.00
One-twelfth Dozen in a Wood Box.

STRAIGHT BIT EXTENSIONS.



KEEN KUTTER*

Polished Steel Extension Rod, 5/8 inch in Diameter, with Squared Ends; Knurled Chuck 5/8 inch in Diameter; Polished Steel Jaws, 2 1/2 inches Long. Will follow a Bit 5/8 inch or over in diameter through the wood.

Nos.	320	324	330
Length over all, inches.....	20	24	30
Weight per dozen about, lbs.....	8 1/2	10 1/2	13
Per dozen	\$21.00	24.00	28.00

One-half Dozen in a Cardboard Box.

ANGULAR BORERS.



CHIPAWAY*

Per Dozen

No. CB—CHIPAWAY*: JAPANNED MALLEABLE IRON Frame 6 1/2 inches Long; With Ball and Socket Joint; Polished Steel Square End Shank; Nickel Plated Chuck; Forged Blued Steel Separate Plain Jaws 2 1/2 inches Long. Joined by Wire; Length over all 10 1/2 inches; Weight per dozen about 18 lbs. \$27.00

AUTOMATIC HAND DRILLS.



KEEN KUTTER*

Nickel Plated Hollow Brass Head and Cylinder; Spirally Fluted Brass Shank; Steel Chuck, with Four Blued Steel Separate Jaws; Complete with Highest Grade Crucible Steel Fluted Drill Points, One each 11/64, 5/32, 9/64, 1/8, 7/64, 3/32, 5/64, 1/16 inch, Contained in Separate Marked Compartments in the Head.

Per Dozen

No. K3—KEEN KUTTER*: Length over all 9 1/2 inches; Weight per dozen about 8 lbs. \$30.00

One-twelfth Dozen in a Cardboard Box.

EXTRA DRILL POINTS.

Blued Steel, Fluted; 2 inches Long.

Per Set

No. 1P—KEEN KUTTER*: IN SETS; Consisting of One each Nos. 1, 2, 3, 4, 5, 6, 7 and 8, Packed in an Envelope; Suitable for Nos. K3 and K4 Hand Drills; Weight per set about 2 ozs. \$1.00

No. 1PS—KEEN KUTTER*: IN STRAIGHT SIZES OF Nos. 1, 2, 3, 4, 5, 6, 7 and 8; Suitable for Nos. K3 and K4 Hand Drills; One Dozen in an Envelope; Weight per dozen about 2 ozs. 1.50

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

HAND DRILLS.

WITH GEAR WHEELS.

Japanned Malleable Iron Frame; Nickel Plated Hollow Brass Handle; Nickel Plated Steel Chuck, with Triple Hardened Steel Jaws; Holds either Fluted Drill Points, or any Twist Drill from $\frac{5}{32}$ to No. 8. Gear Wheels have Deep-cut, Dull-Nickled Teeth; Large Gear Wheel $3\frac{1}{4}$ inches in Diameter, with Nickel Plated Steel Crank and Polished Rosewood Handle; Small Gear Wheel $1\frac{3}{16}$ inch in Diameter.



KEEN KUTTER*

No. K4—KEEN KUTTER*; Burnished Nickel Plated Magazine Handle, with Revolving Cap; COMPLETE WITH EIGHT CRUCIBLE STEEL FLUTED DRILL POINTS, Assorted Sizes; Each Drill Point in a Separate Indexed Compartment; Main Gear Wheel Painted Red; Length over all $10\frac{1}{2}$ inches; Weight per dozen about 24 lbs. \$26.00

One-twelfth Dozen in a Cardboard Box; About Six Dozen in a Case.

BREAST DRILLS.

Finest Tool of Its Kind
on the Market.



KEEN KUTTER BLUE BRAND*, BALL BEARING.



Fire Blueed $1\frac{1}{16}$ inch Highest Grade Steel Shanks, with Level Inserted; Blue Enameled Adjustable Cast Breast Piece, Polished Face, $5 \times 2\frac{1}{4}$ inches; Cast Driving Gear; Steel Ball Bearings; Length over all 17 inches; Polished Deep Cut Teeth on Gear Wheels; Patent Nickel Plated Jaw-retaining Chuck $3\frac{1}{8}$ inches Long, $1\frac{1}{16}$ inches in Diameter, with Separate Toothed Alligator Pattern Forged Steel Jaws, for Square or Round Shank Drills; Nickel Plated Crank 6 inches Long, with Cocobolo Grips, Adjustable to Three Different Sweeps (8, 10 and 12 inches); Patent Cog-locking Catch. Each

No. B0—KEEN KUTTER BLUE BRAND*, CHANGEABLE GEAR; Large Gear Wheel 5 inches in Diameter; Small Gear Wheel $2\frac{3}{4}$ inches in Diameter; Weight each about 5 lbs. \$4.75

No. B3—KEEN KUTTER BLUE BRAND*, DOUBLE BEARING STATIONARY GEAR; Large Gear Wheel 5 inches in Diameter; Small Gears $1\frac{1}{2}$ inches in Diameter; Weight each about $5\frac{1}{2}$ lbs. \$5.25



No. BT600.

KEEN KUTTER BLUE BRAND*.



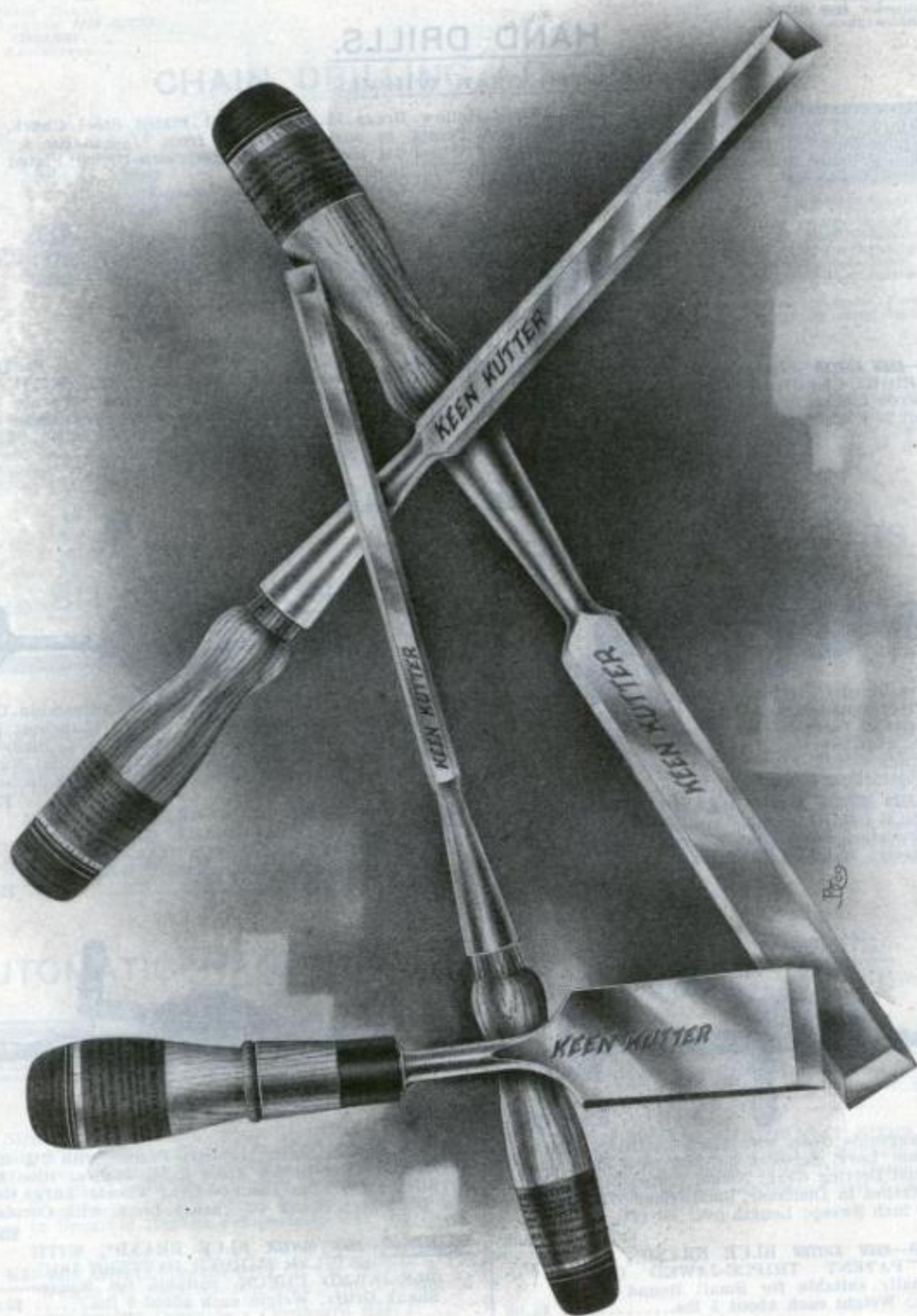
No. BR600.

Changeable Gear, with Hardened Steel Bearings; Maroon Enameled Malleable Iron Frame, with $2\frac{1}{4}$ inch Iron Frame Level Screwed on, and with Blue Enameled Adjustable Cast Breast Piece $5 \times 2\frac{1}{4}$ inches; Blue Enameled Cast Driving Gear; Nickel Plated Chuck and Crank; Polished Deep Cut Teeth on Gear Wheels; Large Gear Wheel 5 inches in Diameter, Small Gear Wheel $2\frac{3}{4}$ inches in Diameter; Crank $5\frac{1}{2}$ inches Long, with Cocobolo Grips; 10 inch Sweep; Length over all $16\frac{1}{2}$ inches. Each

No. BT600—KEEN KUTTER BLUE BRAND*, WITH PATENT TRIPLE-JAWED CHUCK especially suitable for Small Round Shank Drills; Weight each about 5 lbs. \$5.00

No. BR600—KEEN KUTTER BLUE BRAND*, WITH REGULAR BARBER PATTERN DOUBLE-JAWED CHUCK, suitable for Square Shank Drills; Weight each about 6 lbs. \$5.00

One in a Cardboard Box.



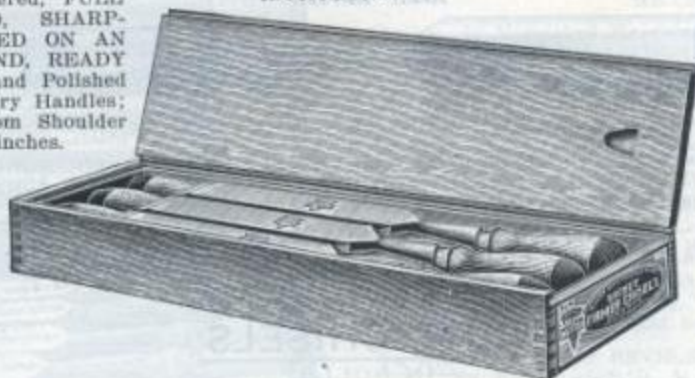
"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SIMMONS
TRADE MARK REGISTERED.

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TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**.
REGISTERED

CHISELS.**KEEN KUTTER®.**

Forged from Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISHED, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; Selected and Polished Leather Capped Hickory Handles; Length of Blades, from Shoulder to Cutting Edge, 6½ inches.



Highest Grade Steel.
Perfectly Tempered.
Leather Capped Handles.

KEEN KUTTER® CHISELS PACKED IN WOOD BOXES.

Mirror Polished Blade.



Ready for Use.

No. A—SOCKET FIRMER, PLAIN BACK.

Size, inches.....	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Weight per dozen about, lbs.....	4	4 1/4	4 1/2	5	6	7	8	9	11	12	15	18
Per dozen	\$12.50	12.50	12.50	13.50	14.50	14.50	15.50	16.50	18.00	19.00	20.00	21.00

One-half Dozen in a Wood Box.

No. A/8—SET OF 8 PLAIN BACK CHISELS No. A, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, and 2 inch;	
Weight per set about 7 lbs.....	\$11.25
No. A/12—SET OF 12 PLAIN BACK CHISELS No. A, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, and 2 inch; Weight per set about 9 lbs.....	16.00

One Set in a Wood Box.

**No. B—SOCKET FIRMER, BEVELED EDGE.**

Size, inches.....	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Weight per dozen about, lbs.....	4	4 1/4	4 1/2	5	6	7	8	9	11	12	15	18
Per dozen	\$16.00	16.00	16.00	17.00	18.00	18.00	19.00	20.00	21.50	22.50	23.50	24.50

One-half Dozen in a Wood Box.

No. B/8—SET OF 8 BEVELED EDGE CHISELS No. B, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, and 2 inch;	
Weight per set about 7 lbs.....	\$13.50
No. B/12—SET OF 12 BEVELED EDGE CHISELS No. B, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, and 2 inch; Weight per set about 9 lbs.....	19.50

One Set in a Wood Box.

SLICKS.**KEEN KUTTER®.**

Forged from Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISHED, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; ENTIRE BLADE AND SOCKET MADE FROM ONE PIECE OF STEEL; Selected and Polished Hickory Handles; Length of Blade, from Shoulder to Cutting Edge 11 inches.

**No. J—PLAIN BACK.**

Size, inches	3	3 1/2
Weight per dozen about, lbs.....	55	60
Per dozen	\$50.00	55.00

One-sixth Dozen in a Wood Box.

No. K—BEVELED EDGE.

Size, inches	3	3 1/2
Weight per dozen about, lbs.....	55	60
Per dozen	\$60.00	65.00

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

CHISELS.

KEEN KUTTER*



No. KTB—TANGED FIRMER, BEVELED EDGE.

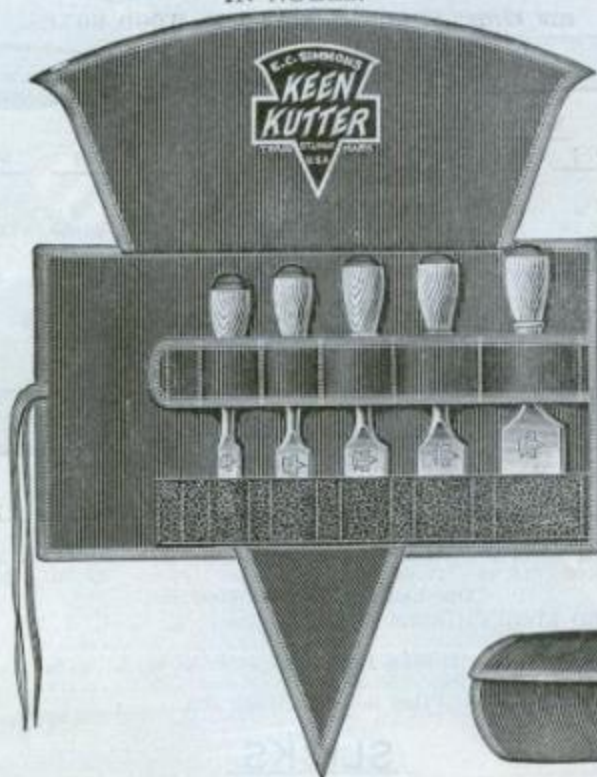
Forged from Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISHED, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE: Selected Fancy Turned Hickory Handle; Brass Ferrule; Length of Blades, from Shoulder to Cutting Edge, $4\frac{3}{8}$ inches.

Size, inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Weight per doz, about, lbs.	3	3	$3\frac{1}{4}$	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	8	10	11	12
Per dozen	\$4.50	4.50	4.75	5.25	5.50	5.75	6.00	6.50	7.75	8.50	10.00	11.50

One-half Dozen in a Wood Box.

BUTT CHISELS

IN ROLLS.



Showing Roll Open.

Showing Roll Closed.

KEEN KUTTER* TANGED.

Dimensions of Roll, 10 inches Long, 4 inches in Diameter.

No.	Description	Per Roll
No. E5	Heavy Black Duck Roll, with Red Binding; Complete with 5 KEEN KUTTER PLAIN BACK Butt Chisels, One Each $\frac{1}{2}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$ and 2 inch.	\$4.50
No. F5	Heavy Black Duck Roll, with Red Binding; Complete with 5 KEEN KUTTER BEVELED EDGE Butt Chisels, One Each $\frac{1}{2}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$ and 2 inch.	5.00

Weight of Roll with Tools about 2 lbs.

Packed Loose.

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TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

CHISELS.

KEEN KUTTER®

KEEN KUTTER® SOCKET FIRMER CHISELS, IN SETS.

In Varnished Hardwood, Hinged Boxes.

Forged from Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISHED, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; Selected and Polished Leather Capped Hickory Handles; Length of Blade, from Shoulder to Cutting Edge, 6½ inches.

Per Set

No. 6/A—SET OF 6 PLAIN BACK CHISELS No. A:
one each, ¼, ½, ¾, 1, 1½ and 2 inch;
Weight per Set about 7 lbs. \$ 8.50

No. AA—SET OF 12 PLAIN BACK CHISELS No. A:
one each, ¼, ½, ¾, 1, 1½, 2, 2½, 3, 3½, 4, 4½,
1½ and 2 inch; Weight per Set about 11 lbs. 16.75

No. BB—SET OF 12 BEVELED EDGE CHISELS No. B:
one each, ¼, ½, ¾, 1, 1½, 2, 2½, 3, 3½, 4, 4½,
1½, 1¾, 1½ and 2 inch; Weight per Set about 11 lbs. 20.25

One Set in a Hardwood Box.



Set No. AA.



KEEN KUTTER® SOCKET FRAMING; Beveled Edge.

Forged from Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISHED, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; Entire Blade and Socket made from One Piece of Steel; Selected and Polished Hickory Handles, with Iron Ferrules at Top; Length of Blade, from Shoulder to Cutting Edge, 8 inches.

Size, inches	¼	½	¾	1	1½	2	2½	3	3½	4	4½	5
Weight per dozen about, lbs.	10	10½	11	11½	12	14	16	18½	21	26	30	30
Per dozen	\$15.00	15.00	16.00	17.00	17.00	18.00	18.00	20.00	22.00	24.00	26.00	26.00

One-half Dozen in a Wood Box.



KEEN KUTTER® SOCKET CORNER.

Forged from Highest Grade Crucible Steel, Oil Tempered; INSIDE OF BLADE GOLD BRONZED; OUTSIDE OF BLADE AND SOCKET FULL MIRROR POLISHED; SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; Selected and Polished Hickory Handles, with Iron Ferrules at Top; Length of Blade, from Shoulder to Cutting Edge, 8 inches.

Size, inches	¾	1	1½
Weight per dozen about, lbs.	12	15½	18
Per dozen	\$32.00	34.00	36.00

One-half Dozen in a Wood Box.



KEEN KUTTER®, TANGED BUTT.

Forged from Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISHED, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; Selected and Polished Leather Capped Hickory Handles, with Heavy Brass Ferrules; Length of Blade, from Shoulder to Cutting Edge, 3 inches; Especially adapted for Fitting Butts to Doors.

No. E—PLAIN BACK.

Size, inches	¾	1	1½
Weight per dozen about, lbs.	3	3½	4
Per dozen	\$4.50	5.00	5.75
Size, inches	1½	2	2½
Weight per dozen about, lbs.	6	6½	7
Per dozen	\$7.75	9.25	10.75

One-half Dozen in a Wood Box.

No. F—BEVELED EDGE.

Size, inches	¾	1	1½
Weight per dozen about, lbs.	3	3½	4
Per dozen	\$5.50	6.00	6.75
Size, inches	1½	2	2½
Weight per dozen about, lbs.	6	6½	7
Per dozen	\$8.75	10.25	11.75

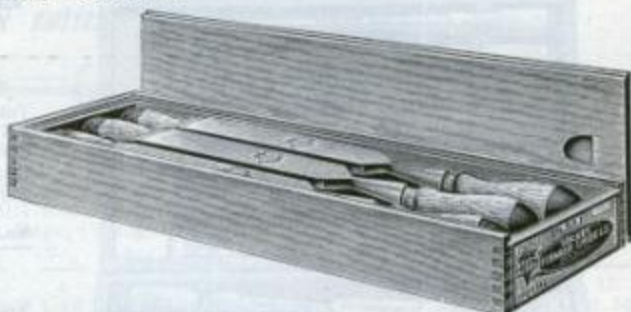
One-half Dozen in a Wood Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

CHISELS.

KEEN KUTTER® SPECIAL.

Forged from Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISHED, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; ENTIRE BLADE AND SOCKET MADE FROM ONE PIECE OF STEEL; Selected and Polished Leather Capped Hickory Handles; Length of Blades, from Shoulder to Cutting Edge, 4 1/4 inches; Average Length over all about 11 1/2 inches.



No. SA—SOCKET FIRMER, PLAIN BACK.

Size, inches	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Weight per dozen about, lbs.	3 3/4	3 3/4	4	4 1/2	5	5 1/4	6	6 1/2	7 1/4	8 1/2	10	10 1/2
Per dozen	\$12.50	12.50	12.50	13.50	14.50	14.50	15.50	16.50	18.00	19.00	20.00	21.00

One-half Dozen in a Wood Box.

No. SAS—SET OF 8 PLAIN BACK CHISELS No. SA, one each, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 and 2 inch; Weight per set about 4 lbs. Per Set \$11.25

No. SA12—SET OF 12 PLAIN BACK CHISELS No. SA, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 and 2 inch; Weight per set about 6 lbs. Per Set 16.00

One Set in a Wood Box.



No. SB—SOCKET FIRMER, BEVELED EDGE.

Size, inches	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Weight per dozen about, lbs.	3 3/4	3 3/4	4	4 1/2	5	5 1/4	5 3/4	6 1/4	7	8 1/2	9 3/4	9 3/4
Per dozen	\$16.00	16.00	16.00	17.00	18.00	18.00	19.00	20.00	21.50	22.50	23.50	24.50

One-half Dozen in a Wood Box.

No. SBS—SET OF 8 BEVELED EDGE CHISELS No. SB, one each, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 and 2 inch; Weight per set about 4 lbs. Per Set \$13.50

No. SB12—SET OF 12 BEVELED EDGE CHISELS No. SB, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 and 2 inch; Weight per set about 6 lbs. Per Set 19.50

One Set in a Wood Box.



SOCKET FIRMER CHISELS IN SETS; IN HINGED COVER HARDWOOD BOXES.

No. S/6A—SET OF 6 PLAIN BACK CHISELS No. SA, one each, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4 and 2 inch; Weight per set about 4 lbs. Per Set \$8.50

No. SAA—SET OF 12 PLAIN BACK CHISELS No. SA, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 and 2 inch; Weight per set about 7 1/4 lbs. Per Set 16.75

No. S/6B—SET OF 6 BEVELED EDGE CHISELS No. SB, one each, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4 and 2 inch; Weight per set about 4 lbs. Per Set 10.50

No. SBB—SET OF 12 BEVELED EDGE CHISELS No. SB, one each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4 and 2 inch; Weight per set about 7 1/4 lbs. Per Set 20.25

One Set in a Varnished Hardwood Box.

MT

CARVING TOOLS

CHISELS.



STANDARD, TURNING, WITHOUT HANDLES.

Forged from Tool Steel, Oil Tempered and Polished; Cutting Edge Beveled from Both Sides; Length of Blade, from Shoulder to Cutting Edge, $6\frac{1}{2}$ inches.

Size, inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Weight per dozen about, lbs.	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4	5	6	7	8	10	13
Per dozen	\$3.00	3.00	3.25	3.60	4.00	4.50	5.00	5.75	7.25	9.25	11.25	13.50

One-half Dozen in a Cardboard Box.



Cast Steel, Polished; NOT HANDLED OR SHARPENED; the 1 inch Chisel is $8\frac{1}{2}$ inches Long from Bolt to the Point.

No. 11—BUCK'S TANGED PARING.

Size, inches	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$
Weight per dozen about, lbs.	$5\frac{1}{2}$	$5\frac{1}{2}$	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$
Per dozen	\$2.80	2.80	2.80	2.90	2.90	3.20	3.55	4.00
Size, inches	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	1 $\frac{3}{4}$	$1\frac{1}{2}$	1 $\frac{3}{4}$	2
Weight per dozen about, lbs.	9	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	$12\frac{1}{2}$
Per dozen	\$4.30	5.25	6.00	7.15	7.70	8.60	10.15	12.50

NOTE—If Ground Sharp a Charge of 20¢ per Dozen Net Extra will be Charged.

$\frac{1}{8}$ to 1 inch, One Dozen, 1 to 2 inch One-half Dozen in a Cardboard Box.



Cast Steel, Polished; Handled with Polished Applewood Handles; Not Sharpened; the $\frac{1}{4}$ inch Chisel has $6\frac{1}{4}$ inch Blade.

No. 48—BUCK'S SOCKET MORTISE.

Size, inches	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$
Weight per dozen about, lbs.	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	$9\frac{1}{2}$	$10\frac{1}{2}$	$11\frac{1}{2}$	$12\frac{1}{2}$	$13\frac{1}{2}$	$14\frac{1}{2}$	$15\frac{1}{2}$
Per dozen	\$7.50	8.00	8.50	8.80	9.25	9.75	10.30	11.00	12.00	13.40

NOTE—If Ground Sharp a Charge of 40¢ per Dozen Net Extra will be charged.

One-half Dozen in a Cardboard Box.



Cast Steel, Polished; Handled with Polished Applewood Handles; Not Sharpened; Length of Blade, from Shoulder to Cutting Edge 8 inches.

No. 43—BUCK'S SOCKET PARING

Size, inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Weight per dozen about, lbs.	3	$3\frac{3}{4}$	4	$4\frac{1}{2}$	5	$5\frac{1}{2}$	6	7	8	9	10	12
Per dozen	\$5.60	5.85	6.25	6.75	7.40	8.25	8.70	9.20	10.35	11.25	12.40	14.00

NOTE—If Ground Sharp a Charge of 20¢ per Dozen Net Extra will be charged.

One-half Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**
REGISTERED.



GOUGES.



KEEN KUTTER*, HANDLED; SOCKET FIRMER.

No. 1B—Inside Bevel.

Forged from Highest Grade Crucible Steel, Oil Tempered; Full Mirror Polished; Sharpened and Whetted on an Oil Stone by Hand Ready for Use; Selected and Polished Leather Capped Hickory Handle; Blade 6 1/4 inches Long.

Size, inches	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Weight per dozen about, lbs.	3 3/4	3 1/2	4	4 1/2	6	7	7 1/2	8 1/2	10	12	16	16 1/2
Per dozen	\$7.75	7.75	8.25	8.75	9.25	9.75	10.25	10.75	11.75	12.75	13.75	14.75

One-half Dozen in a Wood Box.



KEEN KUTTER*, HANDLED; SOCKET FIRMER.

No. 0—Outside Bevel.

Forged from Highest Grade Crucible Steel, Oil Tempered; Full Mirror Polished; SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE. Selected and Polished Leather Capped Hickory Handle; Blade 6 1/4 inches Long.

Size, inches	1/8	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Weight per dozen about, lbs.	3 3/4	3 1/2	4	4 1/2	6	7	7 1/2	8 1/2	10	12	16	16 1/2
Per dozen	\$7.75	7.75	8.25	8.75	9.25	9.75	10.25	10.75	11.75	12.75	13.75	14.75

One-half Dozen in a Wood Box.

Sets of 8; One each, 1/4, 1/2, 3/4, 1, 1 1/4, 1 1/2, 1 3/4, 2 inches; Weight per Set about 6 1/2 lbs. Per Set, \$ 7.50
Sets of 12; One each, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 1 1/2, 1 3/4, 2 inches; Weight per Set about 8 lbs. 10.50
One Set in a Wood Box.



STANDARD, TURNING, WITHOUT HANDLE; OUTSIDE BEVEL.

Forged from Tool Steel, Oil Tempered and Polished; Blade 8 inches Long.

Size, inches	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Weight per dozen about, lbs.	1 1/2	2	2 1/2	3 3/4	4	4 1/2	5 1/2	7	9	11	12
Per dozen	\$3.75	4.25	4.75	5.25	6.00	7.00	8.00	10.00	13.00	15.00	18.00

One-half Dozen in a Cardboard Box.

CARVING TOOLS.

Addis Style, Tanged; Forged from Tool Steel, Tempered, Polished and Blued Finish; Average Length of Blades 5 inches; Average Length over all 7 inches.

No. 1—FIRMERS.

Width of Blade, inches..	1/8	1/4	5/16	3/8
Wgt. per doz. about, lbs.	1/2	1	1	1 1/4
Per dozen	\$2.70	2.70	2.70	2.70
Width of Blade, inches..	1/2	5/8	3/4	1
Wgt. per doz. about, lbs.	1 1/2	1 3/4	2	3
Per dozen	\$2.70	2.70	3.10	3.80

No. 2—CORNER FIRMERS.

Width of Blade, inches..	1/8	1/4	3/8	1/2
Wgt. per doz. about, lbs.	1/2	1	1 1/4	1 1/2
Per dozen	\$2.70	2.70	2.70	2.70
Width of Blade, inches..	5/8	3/4	1	
Weight per dozen about, lbs....	1 3/4	2	3	
Per dozen	\$2.80	3.10	3.80	

No. 3.

STRAIGHT GOUGES.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8	3/4
Wgt. per doz. about, lbs.	1/2	3/4	1 1/4	1 1/2	1 3/4	2
Per dozen	\$3.15	3.15	3.15	3.15	3.15	3.75

No. 5.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8	3/4
Wgt. per doz. about, lbs.	1/2	3/4	1 1/4	1 1/2	1 3/4	2
Per dozen	\$3.15	3.15	3.15	3.15	3.15	3.75

No. 7.

STRAIGHT GOUGES.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8	3/4
Wgt. per doz. about, lbs.	1/2	3/4	1 1/4	1 1/2	1 3/4	2
Per dozen	\$3.15	3.15	3.15	3.15	3.15	3.75

No. 9.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8	3/4
Wgt. per doz. about, lbs.	1/2	3/4	1 1/4	1 1/2	1 3/4	2
Per dozen	\$3.30	3.30	3.30	3.30	3.50	3.90

No. 11—STRAIGHT GOUGES.

Width of Blade, inches..	1/16	1/8	3/16	1/4	5/16	3/8	1/2
Weight per dozen about, lbs.	1/2	3/4	1	1	1 1/4	1 1/2	2
Per dozen	\$3.60	3.60	3.60	3.60	3.60	3.60	3.60

No. 12.

LONG BENT GOUGES.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8
Wgt. per doz. about, lbs.	1/2	3/4	1	1 1/4	2
Per dozen	\$3.80	3.80	3.80	3.80	3.80

No. 14.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8
Wgt. per doz. about, lbs.	1/2	3/4	1	1 1/4	2
Per dozen	\$3.80	3.80	3.80	3.80	3.80

No. 16.

LONG BENT GOUGES.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8
Wgt. per doz. about, lbs.	1/2	3/4	1	1 1/4	2
Per dozen	\$3.80	3.80	3.80	3.80	3.80

No. 18.

Width of Blade, inches..	1/8	1/4	3/8	1/2	5/8
Wgt. per doz. about, lbs.	1/2	3/4	1	1 1/4	2
Per dozen	\$3.80	3.80	3.80	3.80	4.10

No. 20—LONG BENT GOUGES.

Width of Blade, inches..	1/8	1/4	3/8	1/2
Weight per dozen about, lbs.	3/4	1	1 1/4	2
Per dozen	\$3.85	3.85	3.85	3.85

No. 21—SHORT BENT CHISELS.

Width of Blade, inches..	1/8	1/4	3/8	1/2
Weight per dozen about, lbs.	3/4	1	1 1/4	2
Per dozen	\$3.40	3.40	3.40	3.40

One Dozen in a Package.

CARVING TOOLS.

Addis Style, Tanged; Forged from Tool Steel, Tempered, Polished and Blued Finish; Average Length of Blade 5 inches; Average Length over all 7 inches.



SHORT BENT GOUGES.

No. 24.				
Width of Blade, inches.....	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
Per dozen	\$3.80	3.80	3.80	3.80



No. 26.				
Width of Blade, inches.....	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
Per dozen	\$3.80	3.80	3.80	3.80



SHORT BENT GOUGES.

No. 28.				
Width of Blade, inches.....	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
Per dozen	\$3.80	3.80	3.80	3.80



No. 30.				
Width of Blade, inches.....	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
Per dozen	\$3.80	3.80	3.80	3.80



No. 32.

SHORT BENT GOUGES.

Width of Blade, inches.....	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
Per dozen	\$3.85	3.85	3.85	3.85



No. 29.

STRAIGHT PARTING TOOLS.

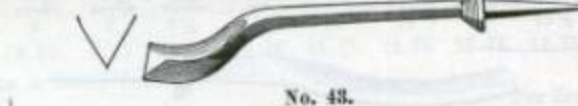
Width of Blade, inches..	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Wgt. per doz. about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Per dozen	\$4.75	4.75	4.75	4.75	4.75



No. 40.

BENT PARTING TOOLS.

Width of Blade, inches..	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Wgt. per doz. about, lbs.	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{3}{4}$	2
Per dozen	\$5.30	5.30	5.30	5.30	5.30



No. 43.

BENT PARTING TOOLS.

Width of Blade, inches..	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Wgt. per doz. about, lbs.	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{3}{4}$	2
Per dozen	\$5.30	5.30	5.30	5.30	5.30

One Dozen in a Package.



CARVING TOOLS IN SETS.

STANDARD, HANDLED, TANGED.

Per Set

No. 66—SET OF 6; One Bent Chisel $\frac{1}{4}$ inch, One Straight Chisel $\frac{5}{16}$ inch, One Bent Gouge $\frac{5}{16}$ inch, One Straight Parting Tool $\frac{3}{16}$ inch, One Corner Firmer $\frac{1}{4}$ inch, One Bent Parting Tool $\frac{3}{16}$ inch; Blades Forged from Tool Steel, Tempered and Polished; Polished Cocobolo Handles; Plain Brass Ferrules; Length of Blades $2\frac{1}{2}$ inches; Length over all $5\frac{1}{2}$ inches; Varnished, Hardwood Box, with Slide Lid; Weight per set about $\frac{1}{2}$ lb. \$2.00

One Set in a Wood Box.

CARVING TOOLS IN SETS.



STANDARD, HANDLED, TANGED.

This Set of 12 Tools is prepared especially for Manual Training Schools and for Amateurs generally. It includes the Best Sizes and Shapes suited for the work. The Blades are made of the Best Steel for this purpose, carefully Tempered, Finished, Ground and Sharpened, ready for use. The Handles are of Cocobolo, 4 inches Long and of the Most Approved Shapes; Brass Ferrules, Nickel Plated; Packed in a Chestnut Box, 10x8½ inches

CONTENTS:—Commencing at Bottom of Cut and going Upwards.

- 1 Straight Chisel, ¼ inch Wide; Length over all 9¼ inches.
- 1 Straight Gouge, ½ inch Wide; Length over all 9 inches.
- 1 Straight Gouge, ¾ inch Wide; Length over all 9 inches.
- 1 Curved Gouge, 5/16 inch Wide; Length over all 8¼ inches.
- 1 Curved Gouge, 9/32 inch Wide; Length over all 8½ inches.
- 1 Curved Gouge, ¼ inch Wide; Length over all 8½ inches.
- 1 Straight Gouge, ¼ inch Wide; Length over all 8½ inches.
- 1 "V" Tool, 3/16 inch Wide; Length over all 8¾ inches.
- 1 Narrow Straight Chisel, ¼ inch Wide; Length over all 8¾ inches.
- 1 Narrow Bevel Chisel, ¾ inch Wide; Length over all 8½ inches.
- 1 "V" Tool, ¼ inch Wide; Length over all 8¾ inches.
- 1 Vaining Tool, 3/32 inch Wide; Length over all 8¾ inches.

No. 120—Carving Tool Set, as described above; Weight per set about 4¼ lbs. Per Set \$10.00

MARKING PUNCHES.

WOOD CARVERS'.



Tool Steel, Hardened and Tempered, Length over all 3 inches.

Nos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Per dozen	\$4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60	4.60

Nos. 14, 15 and 16 are the same as Nos. 8, 9 and 10, but are ROUND instead of SQUARE.

One Dozen in a Cardboard Box; Weight per Dozen about ½ lb.



MALLETS.



CARVERS'.

All Handles 7 inches Long.

	Per Dozen
No. 21—LIGNUM-VITAE HEAD 5 inches Long, 3½ inches Diameter; Weight per dozen about 20 lbs.....	\$4.45
No. 22—LIGNUM-VITAE HEAD 4½ inches Long, 3 inches Diameter; Weight per dozen about 18 lbs.....	3.90
No. 23—LIGNUM-VITAE HEAD 3½ inches Long, 2½ inches Diameter; Weight per dozen about 15 lbs.....	3.35
No. 24—HICKORY HEAD 5 inches Long, 3½ inches Diameter; Weight per dozen about 16 lbs.....	3.35
No. 25—HICKORY HEAD 4½ inches Long, 3 inches Diameter; Weight per dozen about 14 lbs.....	2.80
No. 26—HICKORY HEAD 3½ inches Long, 2½ inches Diameter; Weight per dozen about 11 lbs.....	2.50

Packed Loose.

VICES.

WOOD CARVERS'.



	Each
No. 5/C—Made of Best Quality Maple; Length of Vise 15 inches; Size of Jaw 1½x2½ inches; Opens 5 inches; 1½ inch Bench Screw; Weight each about 16 lbs.....	\$12.00

WOOD CARVERS' BENCH.



	Each
No. 31—Made entirely of Maple; Length over all 45 inches; Width 8 inches; Length of Top exclusive of Tail Vise 39 inches; The Screw is 1½ inches in Diameter; Vise Jaw 8 inches Long and 5 inches Wide; Vise Opens 8 inches; Three Wood Spring Stops furnished with each Bench; Weight each, packed, about 36 lbs.	\$9.00

Packed Loose.

HOOP KNIVES.



No. 132—Blade 1 3/4 inches Wide.

Length of Blade, inches.....	7	8	9	10
Wgt. per dozen about, lbs.....	20	21	22	26
Per dozen	\$11.25	13.25	15.25	17.25

CHAMFER KNIVES.



Right Hand; Blade Forged from Tool Steel, Tempered and Polished; One Polished Walnut Handle; Polished Steel Ferrule; Tang extends through Ferrule and Handle, Clinched at Ends; One Steel Handle, Length 6 1/4 inches; Diameter 1 1/4 inches; Length of Wood Handle 9 inches.

No. 134.

Length of Blade, inches.....	5	6
Weight per dozen about, lbs.....	50	70
Per dozen	\$18.50	22.50

One-twelfth Dozen in a Package.

SPOKE SHAVES.



No. 138—Japanned, Cast Iron Frame; Tool Steel, Tempered and Polished Cutter, with Cap, Steel Adjusting Screws and Ferrules; Polished Walnut Handles; Width of Cutter 3 inches; Length of Handles 5 inches; Length over all 16 1/2 inches; Weight per dozen about 23 lbs. \$15.00

One-half Dozen in a Package.

LEVELERS.



No. 192—Oil Finished Apple Wood Frame and Cap; Tool Steel, Tempered and Polished Cutter; Length 13 inches; Width 3 in.; Size of Cutter 2 1/2 in.; Wgt. per doz. about 30 lbs. \$15.00

One-twelfth Dozen in a Package.

HANDLED ADZES.



Forged from Tool Steel, Tempered, Polished and Japanned; Polished Apple Wood Handle; Steel Bolt extends through Head, Socket and Handle Secured at End by Steel Washer and Nut; Length of Handle 7 1/2 inches.

No. 125—TIGHT BARREL; Width of Cut 3 1/4 inches; Length of Head 9 1/2 inches; Weight per dozen about 47 lbs.	\$30.00
No. 124A—BARREL; Width of Cut 3 1/4 inches; Length of Head 9 1/2 inches; Weight per dozen about 48 lbs.	28.50
No. 125—FLOUR BARREL; Width of Cut 2 1/4 inches; Length of Head 8 inches; Weight per dozen about 36 lbs.	27.00

One-twelfth Dozen in a Package.

COOPERS' TOOLS.

BARTON'S.

Blade Forged from Tool Steel, Tempered and Polished; Polished Walnut Handles; Tangs extend through Handles and Clinched at Ends; Length of Handles 5 inches; Diameter of Handles 1 1/2 inches.



No. 129—Blade 2 1/2 inches Wide.

Length of Blade, inches.....	7	8
Weight per dozen about, lbs.....	26	28
Per dozen	\$12.50	14.50

One-quarter Dozen in a Package.

"V" IRONS.



No. 142—Forged from Tool Steel, Tempered and Polished Bit; Natural Finish Lug; Cuts Grooves up to 1/2 inch Wide; Weight per dozen about 1 lb. \$3.00

One Dozen in a Package.

HOOP DRIVERS.



No. 166—FORGED FROM TOOL STEEL; Polished Bit; Japanned Finished Socket; Width of Bit 2 1/2 inches; Thickness of Bit 1/2 inch; Width of Socket 2 1/4 inches; Height over all 4 inches; Weight per dozen about 15 lbs. \$11.25

No. 165—NANTUCKET; Forged from Tool Steel; Polished Bit; Japanned Finished Head; Width of Bit 1 1/2 inches; Thickness of Bit 1/4 inch; Height over all 4 1/2 inches; Weight per dozen about 15 lbs. 7.50

One-half Dozen in a Package.

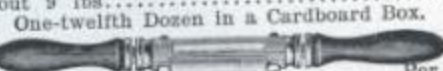
No. 169—PLAIN HICKORY; Japanned Cast Iron Ring on End of Handle; Width of Bit 3 1/2 inches; Length of Bit 4 inches; Thickness of Bit 1 inch; Length of Handle 5 inches; Weight per dozen about 10 1/2 lbs. 3.80

Packed Loose.

SPOKE SHAVES.



No. 67—STANLEY'S UNIVERSAL; Nickel Plated and Polished Frame; Polished Rosewood Handles, with Nickel Plated Steel Ferrules; Tempered and Polished Tool Steel Adjustable Cutter; Two Detachable Bottoms, for use on Straight or Circular Surfaces; Adjustable Width Gauge, for use in Rabbeting; Both Handles Detachable, and either can be Screwed into Frame at Top, when used to work in Corners; Width of Cutter 2 inches; Length over all 9 1/2 inches; Weight per dozen about 9 lbs. \$18.00



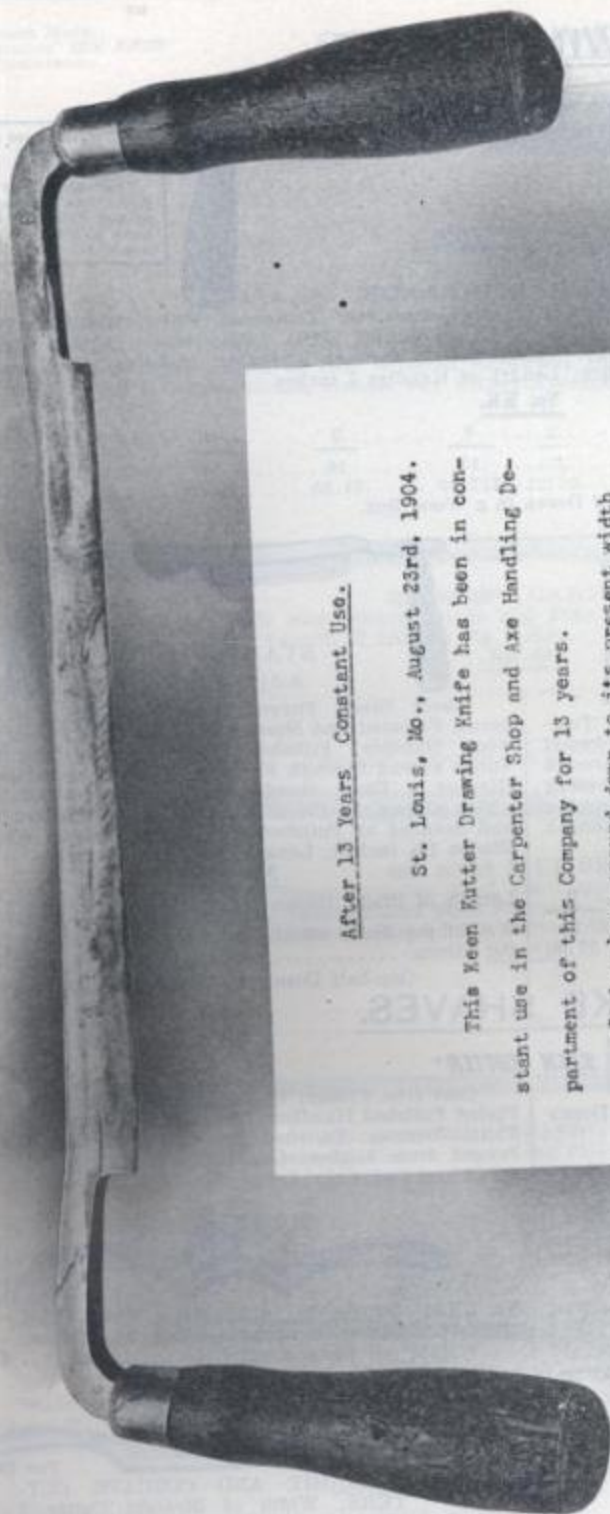
No. 10—CIRCULAR; Adapted to work on Circular or Straight Surfaces; Polished and Nickel Plated Cast Steel Body; Tempered and Polished Tool Steel Adjustable Cutter; Steel Adjusting Screw; Polished Rosewood Handles; Width of Cutter 2 1/4 inches; Length over all 10 inches; Weight per dozen about 6 lbs. \$9.00

One-half Dozen in a Cardboard Box.



For Description and Prices, see Page 62.

"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SINMONS
TRADE MARK REGISTERED.



After 13 Years Constant Use.

St. Louis, Mo., August 23rd, 1904.

This Keen Kutter Drawing Knife has been in constant use in the Carpenter Shop and Axe Handling Department of this Company for 13 years.

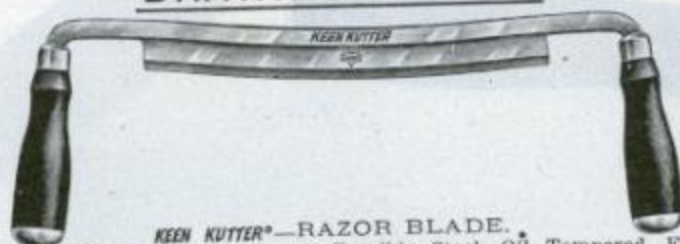
It has been ground down to its present width from an original measurement of 1 1/4-inches, and still has as good a cutting edge as the first day it was used.

Simmons Hardware Company.

"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SIMMONS
TRADE MARK REGISTERED.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

DRAWING KNIVES.



A perfect Tool and the finest Drawing Knife ever produced.

The Blade of every Knife has precisely the proper "Hang," making work a pleasure in the use of it.

KEEN KUTTER®—RAZOR BLADE.

Blades Forged from One Piece of Highest Grade Crucible Steel, Oil Tempered, FULL MIRROR POLISH, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; Ebony Finish Hardwood Handles; Nickel Plated Steel Ferrules and Caps; Tangs extend through Ferrules, Handles and Caps, Carefully Headed at Ends; Width of Blades $1\frac{1}{4}$ inches; Length of Handles 5 inches.

No. KK.

	8	9	10	12	14
Length of Blade, inches.....	15	16	19	21	24
Weight per dozen about, lbs.....	\$22.00	24.00	25.00	27.00	29.00
Per dozen	One-half Dozen in a Wood Box.				



WILKINSON'S.
Folding Handle.

Razor Blade, Forged from Tool Steel, Oil Tempered, Polished and Sharpened; Oil Finished Hardwood Handles; Polished Steel Shanks; Tangs extend through Handles and Riveted at Ends; Handles have Folding Adjustment, secured by Heavy Polished Steel Clamping Screw and Bolt; Width of Blades $1\frac{1}{2}$ inches; Length of Handles $4\frac{1}{4}$ inches.

No. W.

	8	9
Length of Blade, inches.....	21	26
Weight per dozen about, lbs.....	\$24.00	27.00
Per dozen	One-quarter Dozen in a Cardboard Box.	



STANDARD.
Adjustable.

Razor Blade, Forged from Tool Steel, Oil Tempered, Polished and Sharpened; Rosewood Finish Hardwood Handles; Polished Steel Ferrules and Caps; Tangs extend through Ferrules, Handles and Caps, and Riveted at Ends; Handles have Adjustment at Shank which allows the Blade to be Set at any Desired Pitch, and Secured by Polished Steel Clamp Screw; Width of Blades $1\frac{1}{2}$ inches; Length of Handles 5 inches.

No. 165.

	8	9
Length of Blade, inches.....	17½	20
Weight per dozen about, lbs.....	\$12.00	13.50
Per dozen	One-half Dozen in a Cardboard Box.	

SPOKE SHAVES.



KEEN KUTTER®

No. KK90—Varnished Beechwood; Straight Cutter, Forged from Highest Grade Crucible Steel, Oil Tempered and Polished; Patent Thumb Screw Adjustment; Steel Face Plate Screwed to Bottom; Width of Cutter 2½ inches; Length over all $11\frac{1}{4}$ inches; Weight per dozen about $4\frac{1}{2}$ lbs.....\$10.00



No. KK92—STRAIGHT CUTTER. Width 2½ inches; Length over all $10\frac{1}{4}$ inches; Cast Iron Frame; Frosted Nickel Body, and Nickel Plated Polished Handles; Nickel Plated Steel Adjusting Thumb Screws; Polished Face and Steel Cap; Cutters Forged from Highest Grade Crucible Steel, Oil Tempered and Polished; Weight per dozen about $7\frac{1}{2}$ lbs.....\$6.00

One-half Dozen in a Cardboard Box.

Cast Iron Frame; Frosted Nickel Body, and Nickel Plated Polished Handles; Nickel Plated Steel Adjusting Thumb Screws; Polished Face and Steel Cap; Cutters Forged from Highest Grade Crucible Steel, Oil Tempered and Polished.



No. KK94—CONCAVE CUTTER Width 2½ inches; Length over all $9\frac{1}{4}$ inches; Weight per dozen about 7 lbs.....\$6.00



No. KK96—STRAIGHT AND CONCAVE CUTTERS; Width of Straight Cutter 2 inches; Width of Concave Cutter 2½ inches; Length over all $12\frac{1}{4}$ inches; Weight per dozen about $19\frac{1}{2}$ lbs.....\$8.00

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

SCREW DRIVERS.



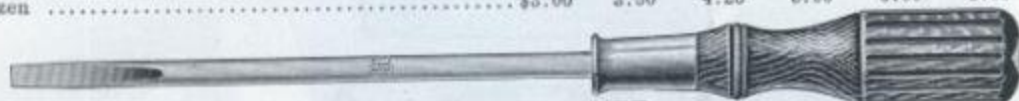
Showing extension of Blade through Handle.

KEEN KUTTER*

Blade Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished, Extending Entirely through Handle, with Large Square Head at Top; Selected Hardwood Handle, Rosewood Finish; Heavy Steel Ferrule; Heavy Rivet passes through Ferrule, Handle and Blade; Average Length of Handle $3\frac{3}{4}$ inches.

No. 50.

Length of Blade, inches	2	3	4	5	6	8	10
Weight per dozen about, lbs.	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{4}$	$4\frac{1}{4}$	5	$7\frac{1}{2}$	$8\frac{3}{4}$
Per dozen	\$3.00	3.50	4.25	5.00	6.00	8.00	10.00



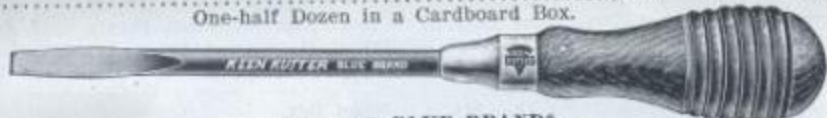
KEEN KUTTER*: CABINET.

Same as No. 50, but Made with Slender Blade and Fine Point; Designed Especially for Cabinet Makers' and Electricians' use; Average Length of Handle $3\frac{1}{2}$ inches.

No. 60.

Length of Blade, inches	$3\frac{1}{2}$	$4\frac{1}{2}$	$5\frac{1}{2}$	$6\frac{1}{2}$	$8\frac{1}{2}$
Weight per dozen about, lbs.	$1\frac{1}{4}$	$2\frac{1}{4}$	3	$3\frac{1}{4}$	$3\frac{1}{2}$
Per dozen	\$3.50	4.50	5.00	5.50	8.50

One-half Dozen in a Cardboard Box.

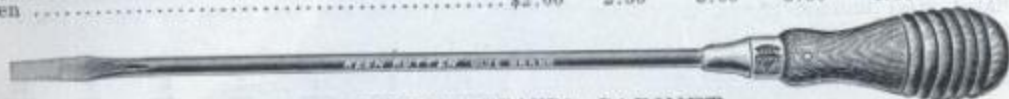


KEEN KUTTER BLUE BRAND*.

Blade Forged from Highest Grade Crucible Steel, Oil Tempered, Polished and Blued; Polished, Beaded Hardwood Handle, Rosewood Finish; Nickel Plated Steel Ferrule; Tang of Blade Extends about Halfway through Length of Handle and Secured by Heavy Riveted Pin Driven through Handle and Tang; Average Length of Handle $3\frac{1}{2}$ inches.

No. 615.

Length of Blade, inches	2	3	4	5	6	8	10
Weight per dozen about, lbs.	2	$2\frac{1}{4}$	3	4	5	$6\frac{1}{2}$	8
Per dozen	\$2.00	2.50	3.00	3.50	4.00	5.50	6.50



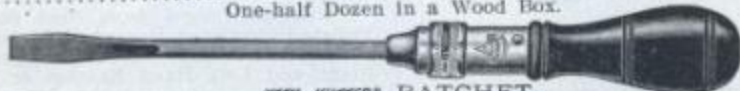
KEEN KUTTER BLUE BRAND*: CABINET.

Same as No. 615, but made with Slender Blade and Fine Points; Designed Especially for Cabinet Makers' and Electricians' Use; Average Length of Handle $3\frac{1}{2}$ inches.

No. 615½.

Length of Blade, inches	4	6	8	10
Weight per dozen about, lbs.	2	3	$4\frac{1}{2}$	$7\frac{1}{2}$
Per dozen	\$3.00	4.00	5.50	6.50

One-half Dozen in a Wood Box.



KEEN KUTTER* RATCHET.

Blade Forged from Highest Grade Crucible Steel, Oil Tempered, Blued Finish Blade; Polished Ebony Finish Hardwood Handle; Nickel Plated Steel Ratchet Case and Reversing Sleeve, Adjustable to work with Right and Left Hand Ratchet or Rigid; Average Length of Handle $3\frac{1}{2}$ inches.

No. KK311—KEEN KUTTER* RATCHET.

Blade, inches	2	3	4	5	6	8	10	12
Weight per dozen about, lbs.	$1\frac{1}{4}$	3	$3\frac{1}{2}$	4	5	6	$7\frac{3}{4}$	$8\frac{3}{4}$
Per dozen	\$6.50	8.00	8.75	9.50	11.25	13.00	15.50	17.00

One-half Dozen in a Cardboard Box.

SCREW DRIVERS.



GAY & PARSON Ratchet.

Tempered and Polished Tool Steel Blade; Nickel Plated Brass Ferrules; Ebony Finish Hardwood Handle; Polished Steel Ratchet Plate; Works Right and Left Hand, Ratchet or Rigid.

No. 6P.

	4	5	6	8
Blade, inches	3 1/2	5	6 1/2	7 1/2
Weight per dozen about, lbs.....	\$9.00	10.20	12.00	13.50
Per dozen				

One-half Dozen in a Cardboard Box.

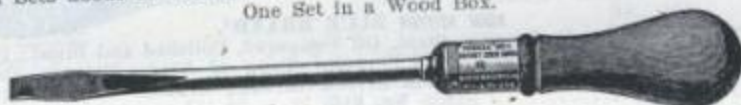


CLARK'S Screw Driver Sets.

In Hardwood, Oil Finished, Hinged Cover Boxes, With Catch.

No. 10—4 Tempered and Polished Tool Steel Detachable Bits; Assorted Width Points, 5/16, 3/8, 7/16 and 9/16 inch; Polished Steel Chuck; Oil Finished Hardwood Handle; Average Length of Blades 5 1/4 inches; Length of Handle 4 1/4 inches; Size of Box 8 inches Long, 3 1/4 inches Wide, 1 1/2 inches Deep; Weight per dozen Sets about 16 lbs. \$15.00

One Set in a Wood Box.



YANKEE RATCHET.

Blade Forged from Tool Steel, Tempered and Polished; Polished Rosewood Finished Hardwood Handle; Nickel Plated Steel Ratchet Sleeve, Adjustable to Work with Right and Left Hand Ratchet or Rigid; Average Length of Handle 3 1/2 inches.

No. 11.

	2	3	4	5	6	8	10	12
Blade, inches	1 1/2	3	3 1/2	4	5	6	7 1/2	8 1/2
Weight per dozen about, lbs.....	\$5.25	6.65	7.25	8.00	9.25	10.65	12.50	13.75
Per dozen								



Per Dozen

No. 12—YANKEE RATCHET; Same Description as

No. 11, but with SHORT, HEAVY BLADE;

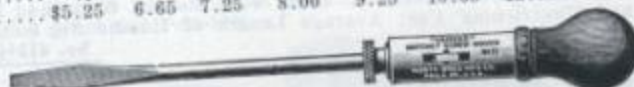
Made especially for Mechanics Requiring a

Short, Strong Screw Driver; Length of Blade

1 1/4 inch; Width of Point 5/16 inch; Length

of Handle 3 1/4 inches; Weight per dozen about

4 lbs. \$8.50



YANKEE RATCHET.

Blade Forged from Tool Steel, Tempered and Polished; Polished Rosewood Finished Handle; Nickel Plated Steel Ratchet Sleeve, Adjustable to Work with Right and Left Hand Ratchet or Rigid; Fitted with Knurled Washer below Ratchet Sleeve with which Small Screws may be Turned with Thumb and Finger, without Moving Hand Grip or Handle; Adapted Especially for Electricians' and Cabinet Makers' Use; Length of Handle and Ratchet Sleeve 2 3/4 inches; Width of Point 3/16 inch.

No. 15.

	2	3	4	5
Blade, inches	1 1/2	1 3/4	2	2 1/2
Weight per doz. about lbs.....	\$5.00	5.50	6.00	6.50
Per dozen				

One-half Dozen in a Cardboard Box.



THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN - E. C. SIMMONS

For Prices and Description, see Page 66.

TRADE MARK
E. C. SIMMONS' KEEN KUTTER
REGISTERED

AWL AND TOOL SETS.

The Finest and most complete
Awl and Tool Sets ever offered.



KEEN KUTTER*

No. 50—KEEN KUTTER*, 10 TOOLS as shown; Highest Grade Crucible Steel Blades, Oil Tempered, Straw Color Finish; CUTTING TOOLS SHARPENED AND WHETTED BY HAND, READY FOR USE; Polished Hollow Cocobolo Handle, with Screw Cap, to contain Blades; Brass Button at top of Cap to prevent splitting; Heavy Steel Screw Chuck, Polished and Knurled; Polished Steel Jaws; Length of Blades 2½ inches; Length of Handle 6¼ inches; Length over all, with Blade attached, 8¼ inches; Diameter of Chuck 15/16 inch; Weight per dozen about 7 lbs. \$18.00



No. 60—KEEN KUTTER*, LARGE SIZE; 10 TOOLS as shown; Highest Grade Crucible Steel Blades, Oil Tempered, Straw Color Finish; CUTTING TOOLS SHARPENED AND WHETTED BY HAND, READY FOR USE; Polished Hollow Cocobolo Handle, with Screw Cap, to contain Blades; Brass Button at Top of Cap to prevent splitting; Heavy Steel Screw Chuck, Polished and Knurled; Polished Steel Jaws; Length of Blades 4 inches; Length of Handle 7¼ inches; Length over all, with Blade attached, 10¼ inches; Diameter of Chuck 11/16 inches; Weight per dozen about 10½ lbs. \$27.00

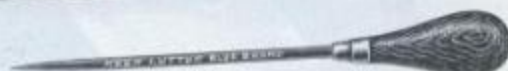
One-half Dozen in a Cardboard Box.

SCRATCH AWLS.



KEEN KUTTER BLUE BRAND*.

No. 111—KEEN KUTTER BLUE BRAND*; Highest Grade Crucible Steel Blade, Oil Tempered, Blued Finish; Hardwood Handle, Rosewood Finish; Nickel Plated Steel Ferrule; Length of Blade 4½ inches; Diameter of Blade 5/32 inch; Length over all 7¼ inches; Weight per dozen about 2 lbs. \$2.50



No. 112—KEEN KUTTER BLUE BRAND*; Highest Grade Crucible Steel Blade, Oil Tempered, Blued Finish; Hardwood Handle, Rosewood Finish; Heavy Nickel Plated Steel Ferrule; Length of Blade 5 inches; Diameter of Blade 7/32 inch; Length over all 8¾ inches; Weight per dozen about 2¼ lbs. \$3.00

BRAD AWLS.



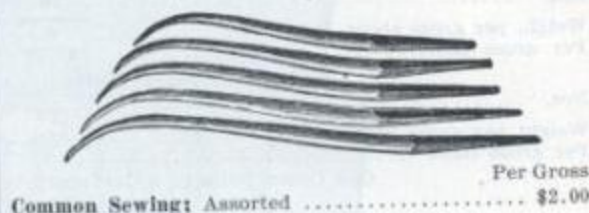
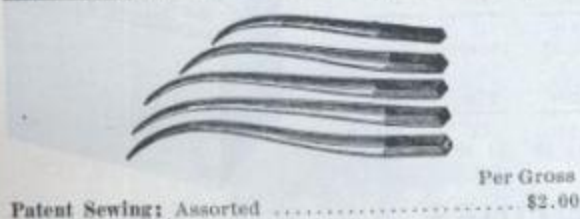
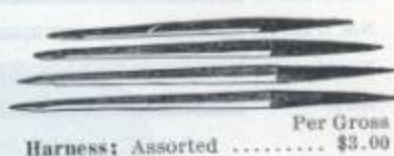
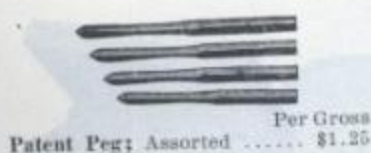
No. 110—KEEN KUTTER BLUE BRAND*; Highest Grade Crucible Steel Blades, Oil Tempered, Blued Finish; Hardwood Handle, Rosewood Finish; Nickel Plated Steel Ferrule; Blades have FLUTED SHANKS, which WILL NOT PULL OUT OF HANDLE; Length of Blades 1½ inches; Diameter of Blades, assorted, 2/32, 3/32 and 4/32 inch; Length over all 5½ inches; Weight per dozen about 1½ lbs. \$2.50

One Dozen in a Wood Box.

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AWLS.

Tempered and Polished Tool Steel; Cuts Actual Size.



One-half Gross in a Box; Weight per Gross about 6 ounces.

CHALK LINES.

White Cotton.



SOFT LAID, Light, in 20 Foot Hanks.

Nos.	1	2	3	4
Wgt. per gross hanks about, lbs.	1½	2¼	2¾	3
Per gross hanks	\$3.60	4.20	5.40	6.00

Twelve Hanks Connected; One-half Gross Hanks in a Cardboard Box.



SOFT LAID, HEAVY, in 20 Foot Hanks.

Nos.	21	22	23
Weight per gross hanks about, lbs.	3¾	4	5
Per gross hanks	\$6.60	7.20	7.80

Twelve Hanks Connected; One-half Gross Hanks in a Cardboard Box.



Per Gross Hanks
No. 24—SOFT LAID, in 100 foot Hanks; Weight
per gross hanks about 24 lbs. \$36.00

One-twelfth Gross Hanks in a Cardboard Box.

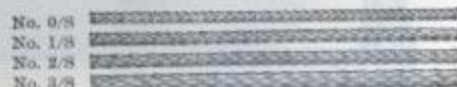
Per Gross Balls
No. 25B—SOFT LAID, HEAVY, in ¼ lb. Balls;
100 feet in a Ball; Weight per gross balls
about 36 lbs. \$48.00

One-twelfth Gross Balls in a Package.



FINE BRAIDED, in 20 Foot Hanks.

Nos.	30	31	32	33
Wgt. per gross hanks about, lbs.	2	3	3½	4½
Per gross hanks	\$12.00	13.80	15.00	16.20



SAMPSON SOLID BRAIDED, in 20 Foot Hanks.

Nos.	0/8	1/8	2/8	3/8
Wgt. per gross hanks about, lbs.	3	4	5	5½
Per gross hanks	\$18.00	21.00	24.00	27.00

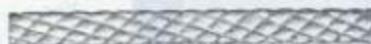
Twelve Hanks Connected; One-half Gross Hanks in a Cardboard Box.



SAMPSON SOLID BRAIDED, in 48 Foot Hanks.

Nos.	3/8/S	4/8	4 1/2/S
Weight per dozen hanks about, lbs.	1½	3½	4½
Per dozen hanks	\$3.00	4.00	5.00

Twelve Hanks Connected; One Dozen Hanks in a Cardboard Box.



SAMPSON SOLID BRAIDED, in 100 Foot Hanks. Per Dozen Hanks

No. 5/S—Weight per dozen hanks about 13 lbs. \$15.00
Two Hanks Connected; One Dozen Hanks in a Package.

Cuts Full Size.

-146-

CHALK LINES.

Cut shows Ball.



SOFT LAID, in 50 Foot Balls.

Nos.	16	17	18	19
Weight per gross about, lbs.	8	9½	11	13
Per gross Balls	\$7.20	7.20	8.40	9.60

In 100 Foot Balls.

Nos.	160	170	180
Weight per gross about, lbs.	16	18	19
Per gross Balls	\$14.40	14.40	14.40

One Dozen Balls in a Cardboard Box.

MASON'S LINES.

No. 20

No. 25

COTTON, HARD LAID.

Per Gross

\$ 9.00

No. 20—WHITE; in Hanks 30 FEET; Weight per gross about 7 lbs. 36.00

No. 25—YELLOW; in Hanks of 100 FEET; Weight per gross about 22 lbs. 36.00

No. 20, One-half Gross Hanks in a Box; No. 25, One Dozen Hanks in a Box.

Cuts Full Size.

CHALK LINE REELS.

Per Dozen

No. 12—POLISHED HARDWOOD; Diameter of ends 2 inches; Diameter of Center ½ inch; Diameter of Axle Hole ¼ inch; Length between ends 2 inches; Length over all 2¾ inches; Weight per dozen about ¾ lb. \$1.20

Three Dozen in a Cardboard Box.

CARPENTERS' CHALK.

PREPARED.

Per Gross

\$1.00

White 1.40

Red 1.75

Blue 1.75

One-half Gross in a Box; 25 Gross in a Case; Weight per Case about 375 lbs.

CARPENTERS' TOOL CHESTS.

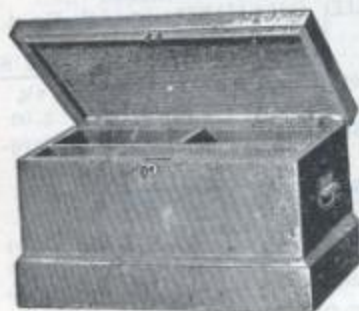
WITHOUT TOOLS.

Heavy White Pine; Hinged Cover; Painted Light Drab with Maroon Trimmings; Heavy Japanned Cast Iron Handle Screwed to Each End; Strong Lock with Key; Inside Tray 3½ inches Deep; Reinforced with Extra Strips at Bottom.

Nos.	1G	2G	3G
Depth, inches	12	12	12
Width, inches	10	15	20
Weight each about, lbs.	24	58	73
Each	\$5.00	6.50	7.50

Sizes Given are Inside Measurements.

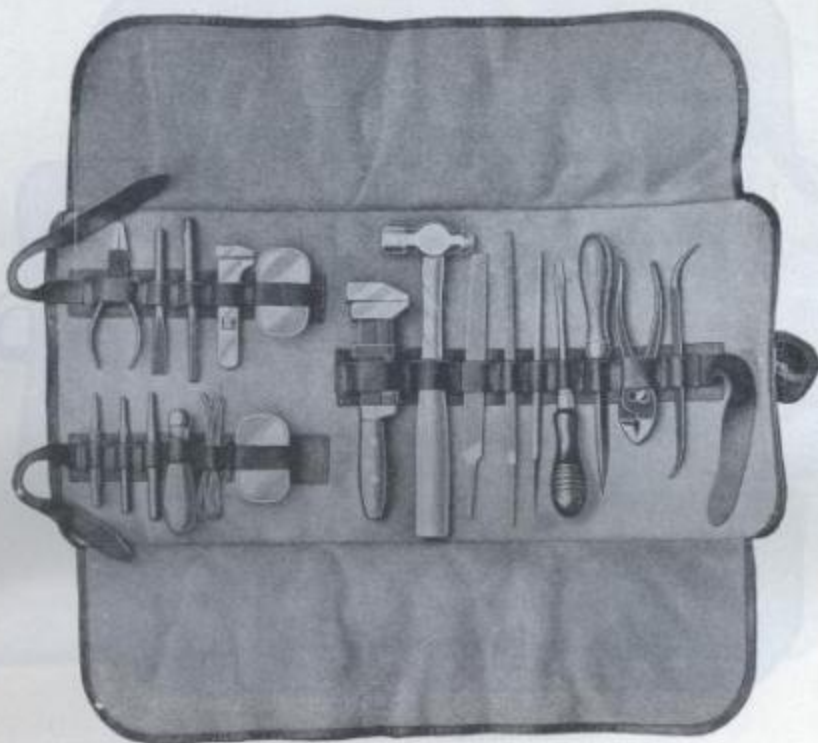
One in a Crate.



-146B-



AUTOMOBILE TOOL KITS.



Dimensions of Roll:

Length 12½ inches; Diameter 5½ inches.

No. 5A—Canvas Roll Tool Kit, Complete with 17 High Grade Tools, etc.....Each
\$10.00

Contents of No. 5A Tool Kit:

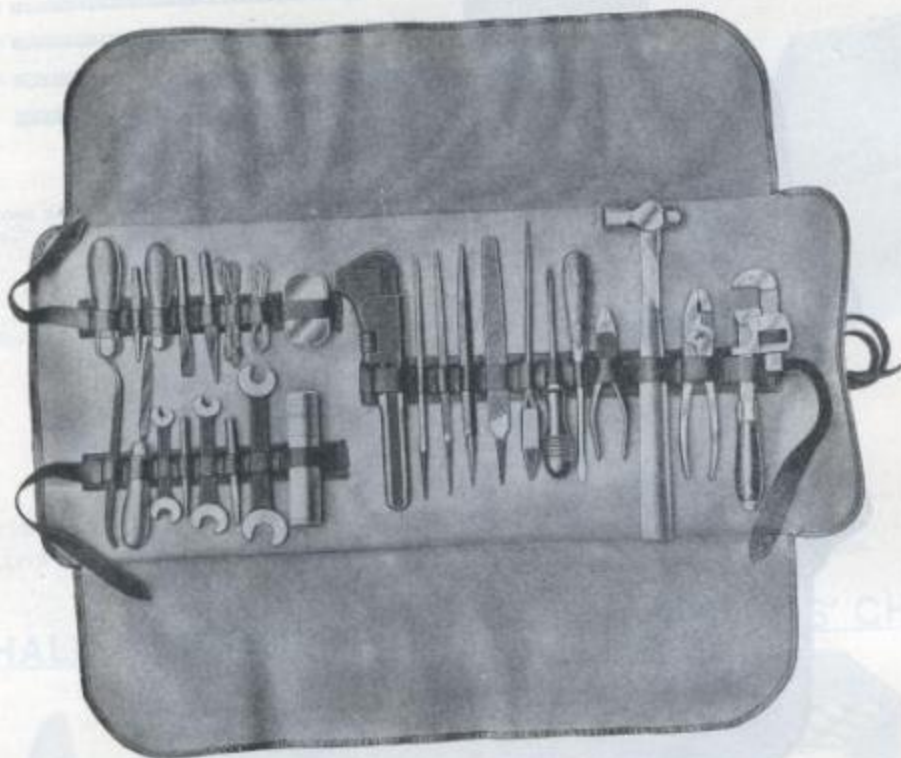
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|---|---|
| 1 KEEN KUTTER Blue Brand Center Punch No. 215. | 1 Solid Punch No. 6. |
| 1 KEEN KUTTER Flat Nose Plier No. 089F, 5 inch. | 1 Oak Leaf Machinists' Hammer No. M3/0. |
| 1 CHIPAWAY Round Bastard File, 7 inch. | 1 Black Combination Plier, 6 inch. |
| 1 CHIPAWAY Square Bastard File, 8 inch. | 1 Three-Cornered Steel Scraper, 4½ inch Blade, with Handle. |
| 1 CHIPAWAY Mill Bastard File, 7 inch. | 1 Cotter Pin Lifter. |
| 1 Drive Well Screw Driver No. 725, 4 inch. | 1 Box Assorted Cotter Pins. |
| 1 Black Jack Wrench No. BJ, 8 inch. | 1 File Handle. |
| 1 Essex Bicycle Wrench No. E. | 2 Pieces Copper Wire. |
| 1 Cape Chisel, ¼ inch. | 1 Box Assorted Spring Lock Washers. |
| 1 Cold Chisel, ½ inch. | |
| 1 Solid Punch No. 3. | |

Weight of Roll, with Tools, about 6 lbs.

Packed Loose.



AUTOMOBILE TOOL KITS.



Dimensions of Roll:

Length 15½ inches; Diameter 6¼ inches.

Each

No. 3A—Canvas Roll Tool Kit, Complete with 21 High Grade Tools, etc. \$15.00

Contents of No. 3A Tool Kit:

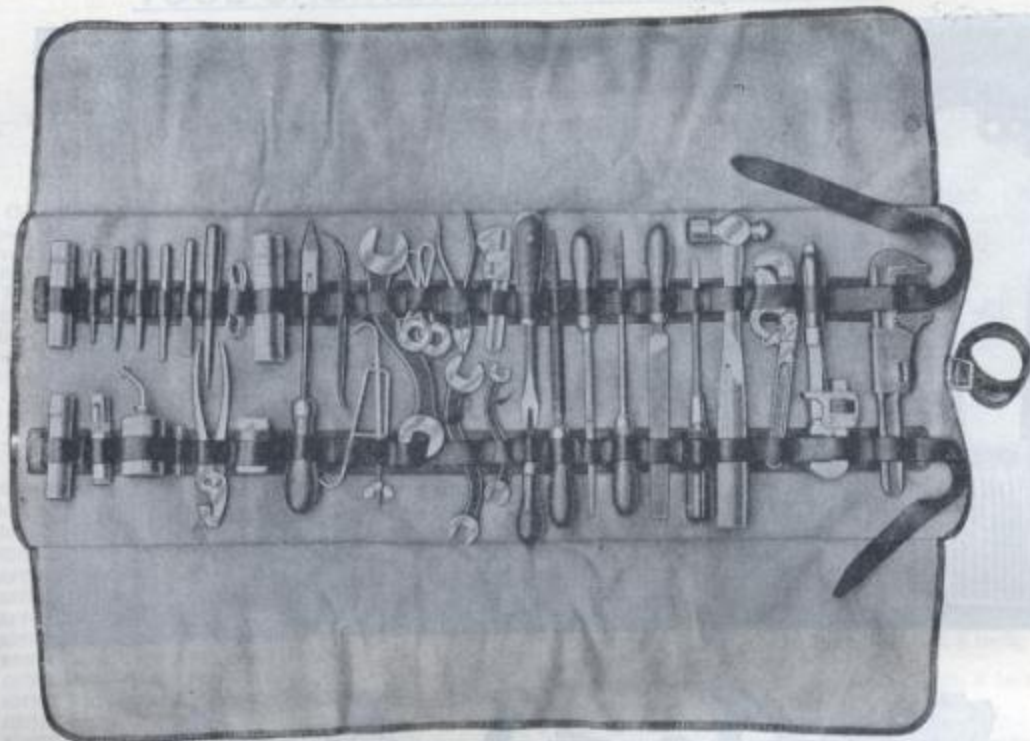
- | | |
|---|--|
| <ul style="list-style-type: none"> 1 KEEN KUTTER Blue Brand Center Punch No. 215. 1 CHIPAWAY Round Bastard File, 8 inch. 1 CHIPAWAY Square Bastard File, 8 inch. 1 CHIPAWAY Mill Bastard File, 8 inch. 1 CHIPAWAY Regular Taper File, 8 inch. 1 CHIPAWAY Side Cutting Plier No. 850, 6 inch. 1 Oak Leaf Machinists' Hammer No. M2/0. 1 Nickel Plated Combination Plier, 8 inch. 1 Perfect Screw Driver, 5 inch. 1 Bull Dog Perfect Screw Driver, 9½ inch. 1 Cold Chisel, ½ inch. 1 Cape Chisel, ¾ inch. 1 Solid Punch No. 3. 1 Solid Punch No. 6. | <ul style="list-style-type: none"> 1 Three-Cornered Steel Scraper, 4½ inch Blade, with Handle. 1 Solid Wrench, No. E9, 9½ inch. 1 Stillson's Pipe Wrench, 10 inch. 1 Engineers' Wrench, Double End, 3/16 and 5/16 inch. 1 Engineers' Wrench, Double End, ¼ and ⅜ inch. 1 Engineers' Wrench, Double End, ⅝ and ¾ inch. 1 Cotter Pin Lifter. 1 File Handle. 1 Soldering Copper, ½ lb., with Handle. 1 Piece, 36 inch, Soft Solder. 1 Soldering Stick. 2 Pieces Copper Wire. 1 Box Assorted Cotter Pins. |
|---|--|

Weight of Roll, with Tools, about 11½ lbs.

Packed Loose.

-146D-

AUTOMOBILE TOOL KITS.



Dimensions of Roll:

Length 16 inches; Diameter 7 inches.

No. 1A—Canvas Roll Tool Kit, Complete with 27 Highest Grade Tools, etc..... Each \$25.00

Contents of No. 1A Tool Kit:

- | | |
|---|---|
| 1 KEEN KUTTER Machinists' Hammer No. KM00. | 1 Stillson's Pipe Wrench, 10 inch. |
| 1 KEEN KUTTER Screw Driver No. 50, 6 inch. | 1 Bullard Pipe Wrench, 10 inch. |
| 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 2 inch. | 1 Essex Bicycle Wrench No. E. |
| 1 KEEN KUTTER Blue Brand Center Punch No. 215. | 1 Engineers' Wrench, Double End, $\frac{3}{4}$ and $\frac{3}{16}$ inch. |
| 1 KEEN KUTTER Mill Bastard File, 8 inch, with Handle. | 1 Engineers' Wrench, Double End, $\frac{3}{8}$ and $\frac{5}{16}$ inch. |
| 1 KEEN KUTTER Square Bastard File, 8 inch, with Handle. | 1 Engineers' Wrench, Double End, $\frac{7}{16}$ and $\frac{1}{2}$ inch. |
| 1 KEEN KUTTER Round Bastard File, 8 inch, with Handle. | 2 Tire Bolt Wrenches. |
| 1 KEEN KUTTER Regular Taper File, 8 inch, with Handle. | 1 Cotter Pin Lifter. |
| 1 KEEN KUTTER Side Cutting Plier No. 950, 6 inch. | 1 Automobile Chain Repairer. |
| 1 Nickel Plated Combination Plier, 8 inch. | 1 Soldering Copper, $\frac{1}{2}$ lb., with Handle. |
| 1 Perfect Screw Driver, $9\frac{1}{2}$ inch. | 1 Soldering Stick. |
| 1 Solid Punch No. 3. | 1 Piece 36 inch Soft Solder. |
| 1 Solid Punch No. 5. | 1 Box Assorted Cotter Pins. |
| 1 Cold Chisel, $\frac{1}{2}$ inch. | 1 Hydrometer, in Case. |
| 1 Cape Chisel, $\frac{3}{4}$ inch. | 1 Nickel Plated Baby Torch. |
| 1 Three-Cornered Steel Scraper, $4\frac{1}{2}$ inch Blade, with Handle. | 1 Spark Plug Brush, in Case. |
| 1 Billings & Spencer Wrench, 10 inch. | 1 Spool Copper Wire. |

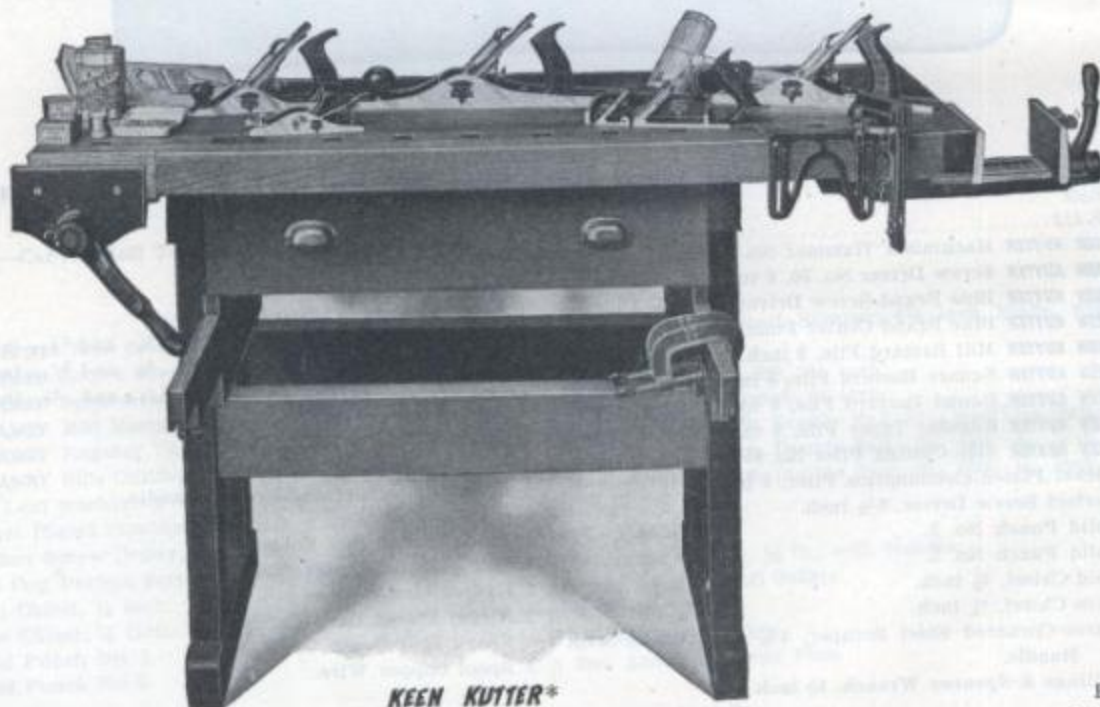
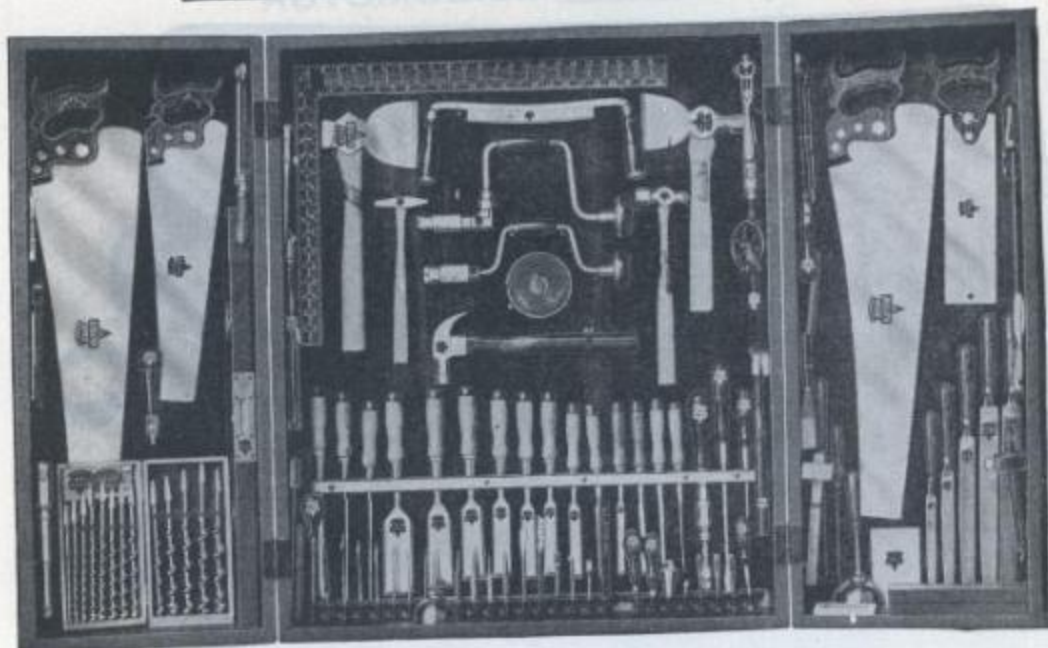
Weight of Roll, with Tools, about 15 lbs.

Packed Loose.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.



TOOL CABINET AND WORK BENCH.



KEEN KUTTER*

No. K15—Wall Cabinet and Work Bench, Complete with 109 Highest Grade Tools..... Each \$125.00
For Contents of Cabinet, see Page 146F

-146 F-

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

TOOL CABINET AND WORK BENCH.

KEEN KUTTER*

No. K15—Wall Cabinet and Work Bench Complete with 109 High Grade Tools Each \$125.00

For Illustration, see Page 146E.

WALL CABINET—Well Seasoned Hard Maple. Height 36 inches; Width, Open, 60 inches; Width, Closed, 30 inches; Depth, Open, 5 inches; Depth, Closed, 10 inches; Two Paneled Box Doors, Finished in Natural Colors, Varnished and Hand Rubbed; Brass Hinges and Cylinder Lock, with Two Steel Keys; Fitted with Racks and Hooks to Hold Tools.

WORK BENCH—Special High Grade; Length 52 inches; Width 22 inches; Height 32 inches; Top 2¼ inches Thick, with Recess at Back 7 inches Wide; Drawer 28 inches Long, 19 inches Wide, 6 inches Deep; Fitted with Quick Acting Iron Vises at Side and End; Iron Bench Stop; Has Special Sliding Trestle; Constructed of Kiln Dried Hard Maple; Side Vise has Jaws Lined with Hard Maple to Prevent Marring Work; Tail Vise has Steel Dog to use in Holding Large Work; Finished in Oil and Shellac.

Contents of No. K15 KEEN KUTTER* Tool Cabinet:

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| 1 KEEN KUTTER Rip Saw No. 88, 26 inch. | 1 KEEN KUTTER Countersink No. 113. |
| 1 KEEN KUTTER Hand Saw No. 88, 26 inch. | 2 KEEN KUTTER Screw Driver Bits No. 103. |
| 1 KEEN KUTTER Panel Saw No. 88, 18 inch. | 1 KEEN KUTTER Automatic Drill No. K3. |
| 1 KEEN KUTTER Cabinet Saw No. 91, 12 inch. | 1 KEEN KUTTER Hand Drill No. K4. |
| 1 KEEN KUTTER Compass Saw No. 93, 12 inch. | 1 KEEN KUTTER Awl and Tool Set No. 50. |
| 1 KEEN KUTTER Hack Saw No. 188A. | 1 KEEN KUTTER Scratch Awl No. 112. |
| 1 KEEN KUTTER Saw Set No. 195. | 2 KEEN KUTTER Brad Awns No. 110. |
| 1 KEEN KUTTER Smooth Plane No. KK3. | 1 KEEN KUTTER Wing Divider No. 10, 8 inch. |
| 1 KEEN KUTTER Jack Plane No. KK5. | 1 KEEN KUTTER Combination Plier No. 160, 6 inch. |
| 1 KEEN KUTTER Fore Plane No. KK5. | 1 KEEN KUTTER Cutting Plier No. 50. |
| 1 KEEN KUTTER Rabbet and Filletster No. KK78. | 1 KEEN KUTTER Carpenters' Pincers No. 808, 8 inch. |
| 1 KEEN KUTTER Block Plane No. KK15. | 1 Each KEEN KUTTER Cold Chisel, ¼, ½, ¾ inch. |
| 1 KEEN KUTTER Blue Brand Steel Square No. K190. | 1 KEEN KUTTER Center Punch. |
| 1 KEEN KUTTER Blue Brand Try Square No. 120, 7½ inch. | 1 Each KEEN KUTTER Nail Set No. 200, 1/32, 1/16, 1/8 inch. |
| 1 KEEN KUTTER Drawing Knife, 8 inch. | 1 KEEN KUTTER Glass Cutter No. 10. |
| 1 KEEN KUTTER Bench Hatchet No. KNB2. | 1 KEEN KUTTER Putty Knife No. 103. |
| 1 KEEN KUTTER Shingling Hatchet No. KNO/1. | 1 KEEN KUTTER Cabinet Scraper, 3x5 inches. |
| 1 KEEN KUTTER Nail Hammer No. K511 ½. | 1 KEEN KUTTER Plumb and Level No. KK4, 26 inch. |
| 1 KEEN KUTTER Nail Hammer No. K513. | 1 KEEN KUTTER Carpenters' Apron No. K. |
| 1 KEEN KUTTER Ball Pein Hammer No. KM3/0. | 1 KEEN KUTTER Mounted Oil Stone No. KMS. |
| 1 KEEN KUTTER Riveting Hammer No. KRO. | 1 KEEN KUTTER Beveled Oil Slip No. KB5. |
| 1 Set KEEN KUTTER Special Auger Bits No. KS13. | 1 Quire KEEN KUTTER Sand Paper, Assorted. |
| 1 KEEN KUTTER Expansion Bit (Large) No. KKL. | 1 E. C. Simmons' Carpenters' Pencil No. 107. |
| 6 KEEN KUTTER Diamond Pat. Gimlet Bits, Assorted. | 1 Red Line Rule No. 620, 2 ft. |
| 1 KEEN KUTTER Ratchet Brace No. KKC10, 10 inch. | 1 Blue Brand Tape Line No. 6075, 75 ft. |
| 1 KEEN KUTTER Plain Brace No. KP6, 6 inch. | 1 Black Jack Wrench No. BJ, 10 inch. |
| 1 Each KEEN KUTTER Special Socket Firmer Chisel No. SB, ¼, ½, ¾, 1, 1½ inch. | 1 Sure Grip Wrench No. 40. |
| 1 Each KEEN KUTTER Gouges, Socket Firmer, ¼, ½, ¾ inch. | 1 Can Klincher Glue, 1 pint. |
| 1 Each KEEN KUTTER Screw Drivers, No. 50, 2-5-8 inch. | 1 Special Mallet. |
| 1 KEEN KUTTER Automatic Screw Driver No. K300. | 1 Plumb Bob No. 11. |
| 1 KEEN KUTTER Countersink for same. | 1 Sliding "T" Borel No. 25H, 10 inch. |
| 1 Each E. C. Simmons' Special Slim Taper Files, 4-6 inch. | 1 Marking Gauge No. 65. |
| 1 Each KEEN KUTTER Mill Files, 6-10 inch. | 1 Mortise Gauge No. 177. |
| 1 Each KEEN KUTTER Mill Files, each 6-10 inch. | 1 Coping Saw No. 1. |
| 1 Each KEEN KUTTER Flat Bastard Files, 8-12 inch. | 1 Tack Claw No. 46. |
| 1 KEEN KUTTER Half Round Cabinet File, 12 inch. | 2 Coppered Steel Oflers. |
| 1 KEEN KUTTER Round File, 8 inch. | 1 Seaveys' Mitre Box No. 159. |
| 8 Apple Wood File Handles. | 1 Pair Malleable Carriage Clamps. |
| 1 KEEN KUTTER Reamer No. 115. | 1 Spool Wire. |
| | 1 Package Assorted Nails and Brads. |
| | 1 Package Assorted Screws. |
| | 1 Package Tacks. |

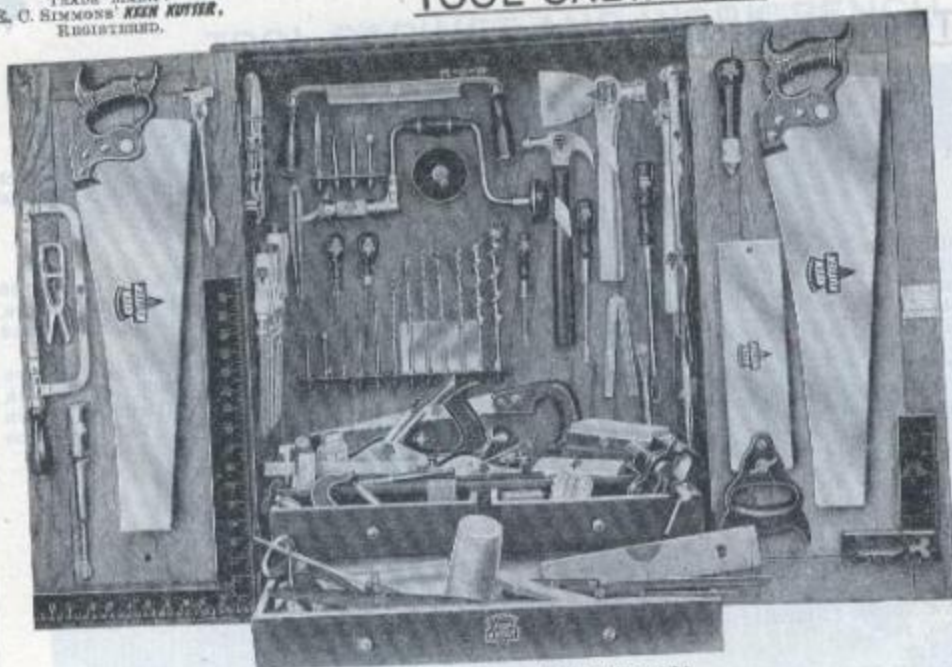
Cabinet and Work Bench in Separate Crates for Shipment. Tools Packed in Wood Box.

Weight of Cabinet, Bench and Tools, Crated for Shipment, about 350 lbs.

For Illustration, see Page 146E.

TOOL CABINETS.

TRADE MARK
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.



Heavy Oak Wall Cabinet with Two Paneled Doors; Three Inside Drawers, 3 inches Deep; Antique Finish, Finely Varnished and Hand Rubbed; Brass Plated Ball Tip Steel Hinges; Two Brass Hangers on Back; Brass Cylinder Lock, with Two Steel Keys; Complete with Outfit of Highest Grade Tools.

Dimensions of Cabinet:

Outside 32 inches High, 26 inches Wide, 10 inches Deep; Inside 30½ inches High, 24½ inches Wide, 8½ inches Deep.

KEEN KUTTER®

Each \$70.00

No. K11W—KEEN KUTTER® Wall Cabinet, Complete with 86 Highest Grade Tools, etc.

Contents of No. K11W KEEN KUTTER® Tool Cabinet:

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|--|--|
| 1 KEEN KUTTER Iron Jack Plane No. KK5C. | 1 KEEN KUTTER Oil Stone, Mounted, No. KM6. |
| 1 KEEN KUTTER Block Plane No. KK9½. | 1 KEEN KUTTER Beveled Oil Slip No. KBS. |
| 1 KEEN KUTTER Hand Saw No. 88, 22 inch. | 1 KEEN KUTTER Awl and Tool Set No. 50. |
| 1 KEEN KUTTER Rip Saw No. 88, 22 inch. | 1 KEEN KUTTER Screw Driver No. 50, 3, 5 and 8 inch. |
| 1 KEEN KUTTER Compass Saw No. 95, 12 inch. | 1 KEEN KUTTER Blue Brand Divider No. 691, 8 inch. |
| 1 KEEN KUTTER Hack Saw No. 188, 8 inch. | 1 KEEN KUTTER Blue Brand Scratch Awl No. 111. |
| 1 KEEN KUTTER Hack Saw Blades No. KR, 8 inch. | 1 KEEN KUTTER Blue Brand Brad Awl No. 110. |
| 12 KEEN KUTTER Cabinet Saw No. 91, 12 inch. | 1 each KEEN KUTTER Nail Set No. 200, ⅜ and ½ inch. |
| 1 KEEN KUTTER Coping Saw No. 100. | 1 KEEN KUTTER Black Jack Cold Chisel, ¾ inch. |
| 1 KEEN KUTTER Nail Hammer No. K512. | 1 KEEN KUTTER Side Cutting Plier No. 950, 7 inch. |
| 1 KEEN KUTTER Machinists' Hammer No. KM30. | 1 KEEN KUTTER Combination Plier, Nickel Plated, No. 160. |
| 1 KEEN KUTTER Tack Hammer No. K500. | 1 KEEN KUTTER Carpenters' Pincers, No. 808. |
| 1 KEEN KUTTER Shingling Hatchet No. KNO/1. | 1 KEEN KUTTER Glass Cutter No. 10. |
| 1 KEEN KUTTER Blue Brand Steel Square, 12x18 inch. | 1 KEEN KUTTER Cabinet Scraper, 3x5 inch. |
| 1 KEEN KUTTER Blue Brand Try Square No. 120, 6 inch. | 1 KEEN KUTTER Carpenters' Apron No. K. |
| 1 Sliding T Bevel. | 1 Pair KEEN KUTTER Tinners' Snips No. 9. |
| 1 KEEN KUTTER Drawing Knife, 8 inch. | 1 Black Jack Wrench No. BJ, 8 inch. |
| 1 KEEN KUTTER Ratchet Brace No. 104, 10 inch. | 1 Sure Grip Wrench No. 40. |
| 1 each KEEN KUTTER Special Auger Bit No. KS, ⅜, ½, ⅝, ¾, 1, 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 7½, 8, 8½, 9, 9½, 10, 10½, 11, 11½, 12, 12½, 13, 13½, 14, 14½, 15, 15½, 16, 16½, 17, 17½, 18, 18½, 19, 19½, 20, 20½, 21, 21½, 22, 22½, 23, 23½, 24, 24½, 25, 25½, 26, 26½, 27, 27½, 28, 28½, 29, 29½, 30, 30½, 31, 31½, 32, 32½, 33, 33½, 34, 34½, 35, 35½, 36, 36½, 37, 37½, 38, 38½, 39, 39½, 40, 40½, 41, 41½, 42, 42½, 43, 43½, 44, 44½, 45, 45½, 46, 46½, 47, 47½, 48, 48½, 49, 49½, 50, 50½, 51, 51½, 52, 52½, 53, 53½, 54, 54½, 55, 55½, 56, 56½, 57, 57½, 58, 58½, 59, 59½, 60, 60½, 61, 61½, 62, 62½, 63, 63½, 64, 64½, 65, 65½, 66, 66½, 67, 67½, 68, 68½, 69, 69½, 70, 70½, 71, 71½, 72, 72½, 73, 73½, 74, 74½, 75, 75½, 76, 76½, 77, 77½, 78, 78½, 79, 79½, 80, 80½, 81, 81½, 82, 82½, 83, 83½, 84, 84½, 85, 85½, 86, 86½, 87, 87½, 88, 88½, 89, 89½, 90, 90½, 91, 91½, 92, 92½, 93, 93½, 94, 94½, 95, 95½, 96, 96½, 97, 97½, 98, 98½, 99, 99½, 100, 100½, 101, 101½, 102, 102½, 103, 103½, 104, 104½, 105, 105½, 106, 106½, 107, 107½, 108, 108½, 109, 109½, 110, 110½, 111, 111½, 112, 112½, 113, 113½, 114, 114½, 115, 115½, 116, 116½, 117, 117½, 118, 118½, 119, 119½, 120, 120½, 121, 121½, 122, 122½, 123, 123½, 124, 124½, 125, 125½, 126, 126½, 127, 127½, 128, 128½, 129, 129½, 130, 130½, 131, 131½, 132, 132½, 133, 133½, 134, 134½, 135, 135½, 136, 136½, 137, 137½, 138, 138½, 139, 139½, 140, 140½, 141, 141½, 142, 142½, 143, 143½, 144, 144½, 145, 145½, 146, 146½, 147, 147½, 148, 148½, 149, 149½, 150, 150½, 151, 151½, 152, 152½, 153, 153½, 154, 154½, 155, 155½, 156, 156½, 157, 157½, 158, 158½, 159, 159½, 160, 160½, 161, 161½, 162, 162½, 163, 163½, 164, 164½, 165, 165½, 166, 166½, 167, 167½, 168, 168½, 169, 169½, 170, 170½, 171, 171½, 172, 172½, 173, 173½, 174, 174½, 175, 175½, 176, 176½, 177, 177½, 178, 178½, 179, 179½, 180, 180½, 181, 181½, 182, 182½, 183, 183½, 184, 184½, 185, 185½, 186, 186½, 187, 187½, 188, 188½, 189, 189½, 190, 190½, 191, 191½, 192, 192½, 193, 193½, 194, 194½, 195, 195½, 196, 196½, 197, 197½, 198, 198½, 199, 199½, 200, 200½, 201, 201½, 202, 202½, 203, 203½, 204, 204½, 205, 205½, 206, 206½, 207, 207½, 208, 208½, 209, 209½, 210, 210½, 211, 211½, 212, 212½, 213, 213½, 214, 214½, 215, 215½, 216, 216½, 217, 217½, 218, 218½, 219, 219½, 220, 220½, 221, 221½, 222, 222½, 223, 223½, 224, 224½, 225, 225½, 226, 226½, 227, 227½, 228, 228½, 229, 229½, 230, 230½, 231, 231½, 232, 232½, 233, 233½, 234, 234½, 235, 235½, 236, 236½, 237, 237½, 238, 238½, 239, 239½, 240, 240½, 241, 241½, 242, 242½, 243, 243½, 244, 244½, 245, 245½, 246, 246½, 247, 247½, 248, 248½, 249, 249½, 250, 250½, 251, 251½, 252, 252½, 253, 253½, 254, 254½, 255, 255½, 256, 256½, 257, 257½, 258, 258½, 259, 259½, 260, 260½, 261, 261½, 262, 262½, 263, 263½, 264, 264½, 265, 265½, 266, 266½, 267, 267½, 268, 268½, 269, 269½, 270, 270½, 271, 271½, 272, 272½, 273, 273½, 274, 274½, 275, 275½, 276, 276½, 277, 277½, 278, 278½, 279, 279½, 280, 280½, 281, 281½, 282, 282½, 283, 283½, 284, 284½, 285, 285½, 286, 286½, 287, 287½, 288, 288½, 289, 289½, 290, 290½, 291, 291½, 292, 292½, 293, 293½, 294, 294½, 295, 295½, 296, 296½, 297, 297½, 298, 298½, 299, 299½, 300, 300½, 301, 301½, 302, 302½, 303, 303½, 304, 304½, 305, 305½, 306, 306½, 307, 307½, 308, 308½, 309, 309½, 310, 310½, 311, 311½, 312, 312½, 313, 313½, 314, 314½, 315, 315½, 316, 316½, 317, 317½, 318, 318½, 319, 319½, 320, 320½, 321, 321½, 322, 322½, 323, 323½, 324, 324½, 325, 325½, 326, 326½, 327, 327½, 328, 328½, 329, 329½, 330, 330½, 331, 331½, 332, 332½, 333, 333½, 334, 334½, 335, 335½, 336, 336½, 337, 337½, 338, 338½, 339, 339½, 340, 340½, 341, 341½, 342, 342½, 343, 343½, 344, 344½, 345, 345½, 346, 346½, 347, 347½, 348, 348½, 349, 349½, 350, 350½, 351, 351½, 352, 352½, 353, 353½, 354, 354½, 355, 355½, 356, 356½, 357, 357½, 358, 358½, 359, 359½, 360, 360½, 361, 361½, 362, 362½, 363, 363½, 364, 364½, 365, 365½, 366, 366½, 367, 367½, 368, 368½, 369, 369½, 370, 370½, 371, 371½, 372, 372½, 373, 373½, 374, 374½, 375, 375½, 376, 376½, 377, 377½, 378, 378½, 379, 379½, 380, 380½, 381, 381½, 382, 382½, 383, 383½, 384, 384½, 385, 385½, 386, 386½, 387, 387½, 388, 388½, 389, 389½, 390, 390½, 391, 391½, 392, 392½, 393, 393½, 394, 394½, 395, 395½, 396, 396½, 397, 397½, 398, 398½, 399, 399½, 400, 400½, 401, 401½, 402, 402½, 403, 403½, 404, 404½, 405, 405½, 406, 406½, 407, 407½, 408, 408½, 409, 409½, 410, 410½, 411, 411½, 412, 412½, 413, 413½, 414, 414½, 415, 415½, 416, 416½, 417, 417½, 418, 418½, 419, 419½, 420, 420½, 421, 421½, 422, 422½, 423, 423½, 424, 424½, 425, 425½, 426, 426½, 427, 427½, 428, 428½, 429, 429½, 430, 430½, 431, 431½, 432, 432½, 433, 433½, 434, 434½, 435, 435½, 436, 436½, 437, 437½, 438, 438½, 439, 439½, 440, 440½, 441, 441½, 442, 442½, 443, 443½, 444, 444½, 445, 445½, 446, 446½, 447, 447½, 448, 448½, 449, 449½, 450, 450½, 451, 451½, 452, 452½, 453, 453½, 454, 454½, 455, 455½, 456, 456½, 457, 457½, 458, 458½, 459, 459½, 460, 460½, 461, 461½, 462, 462½, 463, 463½, 464, 464½, 465, 465½, 466, 466½, 467, 467½, 468, 468½, 469, 469½, 470, 470½, 471, 471½, 472, 472½, 473, 473½, 474, 474½, 475, 475½, 476, 476½, 477, 477½, 478, 478½, 479, 479½, 480, 480½, 481, 481½, 482, 482½, 483, 483½, 484, 484½, 485, 485½, 486, 486½, 487, 487½, 488, 488½, 489, 489½, 490, 490½, 491, 491½, 492, 492½, 493, 493½, 494, 494½, 495, 495½, 496, 496½, 497, 497½, 498, 498½, 499, 499½, 500, 500½, 501, 501½, 502, 502½, 503, 503½, 504, 504½, 505, 505½, 506, 506½, 507, 507½, 508, 508½, 509, 509½, 510, 510½, 511, 511½, 512, 512½, 513, 513½, 514, 514½, 515, 515½, 516, 516½, 517, 517½, 518, 518½, 519, 519½, 520, 520½, 521, 521½, 522, 522½, 523, 523½, 524, 524½, 525, 525½, 526, 526½, 527, 527½, 528, 528½, 529, 529½, 530, 530½, 531, 531½, 532, 532½, 533, 533½, 534, 534½, 535, 535½, 536, 536½, 537, 537½, 538, 538½, 539, 539½, 540, 540½, 541, 541½, 542, 542½, 543, 543½, 544, 544½, 545, 545½, 546, 546½, 547, 547½, 548, 548½, 549, 549½, 550, 550½, 551, 551½, 552, 552½, 553, 553½, 554, 554½, 555, 555½, 556, 556½, 557, 557½, 558, 558½, 559, 559½, 560, 560½, 561, 561½, 562, 562½, 563, 563½, 564, 564½, 565, 565½, 566, 566½, 567, 567½, 568, 568½, 569, 569½, 570, 570½, 571, 571½, 572, 572½, 573, 573½, 574, 574½, 575, 575½, 576, 576½, 577, 577½, 578, 578½, 579, 579½, 580, 580½, 581, 581½, 582, 582½, 583, 583½, 584, 584½, 585, 585½, 586, 586½, 587, 587½, 588, 588½, 589, 589½, 590, 590½, 591, 591½, 592, 592½, 593, 593½, 594, 594½, 595, 595½, 596, 596½, 597, 597½, 598, 598½, 599, 599½, 600, 600½, 601, 601½, 602, 602½, 603, 603½, 604, 604½, 605, 605½, 606, 606½, 607, 607½, 608, 608½, 609, 609½, 610, 610½, 611, 611½, 612, 612½, 613, 613½, 614, 614½, 615, 615½, 616, 616½, 617, 617½, 618, 618½, 619, 619½, 620, 620½, 621, 621½, 622, 622½, 623, 623½, 624, 624½, 625, 625½, 626, 626½, 627, 627½, 628, 628½, 629, 629½, 630, 630½, 631, 631½, 632, 632½, 633, 633½, 634, 634½, 635, 635½, 636, 636½, 637, 637½, 638, 638½, 639, 639½, 640, 640½, 641, 641½, 642, 642½, 643, 643½, 644, 644½, 645, 645½, 646, 646½, 647, 647½, 648, 648½, 649, 649½, 650, 650½, 651, 651½, 652, 652½, 653, 653½, 654, 654½, 655, 655½, 656, 656½, 657, 657½, 658, 658½, 659, 659½, 660, 660½, 661, 661½, 662, 662½, 663, 663½, 664, 664½, 665, 665½, 666, 666½, 667, 667½, 668, 668½, 669, 669½, 670, 670½, 671, 671½, 672, 672½, 673, 673½, 674, 674½, 675, 675½, 676, 676½, 677, 677½, 678, 678½, 679, 679½, 680, 680½, 681, 681½, 682, 682½, 683, 683½, 684, 684½, 685, 685½, 686, 686½, 687, 687½, 688, 688½, 689, 689½, 690, 690½, 691, 691½, 692, 692½, 693, 693½, 694, 694½, 695, 695½, 696, 696½, 697, 697½, 698, 698½, 699, 699½, 700, 700½, 701, 701½, 702, 702½, 703, 703½, 704, 704½, 705, 705½, 706, 706½, 707, 707½, 708, 708½, 709, 709½, 710, 710½, 711, 711½, 712, 712½, 713, 713½, 714, 714½, 715, 715½, 716, 716½, 717, 717½, 718, 718½, 719, 719½, 720, 720½, 721, 721½, 722, 722½, 723, 723½, 724, 724½, 725, 725½, 726, 726½, 727, 727½, 728, 728½, 729, 729½, 730, 730½, 731, 731½, 732, 732½, 733, 733½, 734, 734½, 735, 735½, 736, 736½, 737, 737½, 738, 738½, 739, 739½, 740, 740½, 741, 741½, 742, 742½, 743, 743½, 744, 744½, 745, 745½, 746, 746½, 747, 747½, 748, 748½, 749, 749½, 750, 750½, 751, 751½, 752, 752½, 753, 753½, 754, 754½, 755, 755½, 756, 756½, 757, 757½, 758, 758½, 759, 759½, 760, 760½, 761, 761½, 762, 762½, 763, 763½, 764, 764½, 765, 765½, 766, 766½, 767, 767½, 768, 768½, 769, 769½, 770, 770½, 771, 771½, 772, 772½, 773, 773½, 774, 774½, 775, 775½, 776, 776½, 777, 777½, 778, 778½, 779, 779½, 780, 780½, 781, 781½, 782, 782½, 783, 783½, 784, 784½, 785, 785½, 786, 786½, 787, 787½, 788, 788½, 789, 789½, 790, 790½, 791, 791½, 792, 792½, 793, 793½, 794, 794½, 795, 795½, 796, 796½, 797, 797½, 798, 798½, 799, 799½, 800, 800½, 801, 801½, 802, 802½, 803, 803½, 804, 804½, 805, 805½, 806, 806½, 807, 807½, 808, 808½, 809, 809½, 810, 810½, 811, 811½, 812, 812½, 813, 813½, 814, 814½, 815, 815½, 816, 816½, 817, 817½, 818, 818½, 819, 819½, 820, 820½, 821, 821½, 822, 822½, 823, 823½, 824, 824½, 825, 825½, 826, 826½, 827, 827½, 828, 828½, 829, 829½, 830, 830½, 831, 831½, 832, 832½, 833, 833½, 834, 834½, 835, 835½, 836, 836½, 837, 837½, 838, 838½, 839, 839½, 840, 840½, 841, 841½, 842, 842½, 843, 843½, 844, 844½, 845, 845½, 846, 846½, 847, 847½, 848, 848½, 849, 849½, 850, 850½, 851, 851½, 852, 852½, 853, 853½, 854, 854½, 855, 855½, 856, 856½, 857, 857½, 858, 858½, 859, 859½, 860, 860½, 861, 861½, 862, 862½, 863, 863½, 864, 864½, 865, 865½, 866, 866½, 867, 867½, 868, 868½, 869, 869½, 870, 870½, 871, 871½, 872, 872½, 873, 873½, 874, 874½, 875, 875½, 876, 876½, 877, 877½, 878, 878½, 879, 879½, 880, 880½, 881, 881½, 882, 882½, 883, 883½, 884, 884½, 885, 885½, 886, 886½, 887, 887½, 888, 888½, 889, 889½, 890, 890½, 891, 891½, 892, 892½, 893, 893½, 894, 894½, 895, 895½, 896, 896½, 897, 897½, 898, 898½, 899, 899½, 900, 900½, 901, 901½, 902, 902½, 903, 903½, 904, 904½, 905, 905½, 906, 906½, 907, 907½, 908, 908½, 909, 909½, 910, 910½, 911, 911½, 912, 912½, 913, 913½, 914, 914½, 915, 915½, 916, 916½, 917, 917½, 918, 918½, 919, 919½, 920, 920½, 921, 921½, 922, 922½, 923, 923½, 924, 924½, 925, 925½, 926, 926½, 927, 927½, 928, 928½, 929, 929½, 930, 930½, 931, 931½, 932, 932½, 933, 933½, 934, 934½, 935, 935½, 936, 936½, 937, 937½, 938, 938½, 939, 939½, 940, 940½, 941, 941½, 942, 942½, 943, 943½, 944, 944½, 945, 945½, 946, 946½, 947, 947½, 948, 948½, 949, 949½, 950, 950½, 951, 951½, 952, 952½, 953, 953½, 954, 954½, 955, 955½, 956, 956½, 957, 957½, 958, 958½, 959, 959½, 960, 960½, 961, 961½, 962, 962½, 963, 963½, 964, 964½, 965, 965½, 966, 966½, 967, 967½, 968, 968½, 969, 969½, 970, 970½, 971, 971½, 972, 972½, 973, 973½, 974, 974½, 975, 975½, 976, 976½, 977, 977½, 978, 978½, 979, 979½, 980, 980½, 981, 981½, 982, 982½, 983, 983½, 984, 984½, 985, 985½, 986, 986½, 987, 987½, 988, 988½, 989, 989½, 990, 990½, 991, 991½, 992, 992½, | |

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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

TOOL CABINETS.



KEEN KUTTER*

No. K11C—KEEN KUTTER* Corner Cabinet, Complete with Outfit of 85 Highest Grade Tools, etc.....\$70.00

Contents of No. K11C KEEN KUTTER* Tool Cabinet.

- | | |
|---|--|
| 1 KEEN KUTTER Iron Jack Plane No. KK5C. | 1 KEEN KUTTER Half Round Cabinet File, 10 inch, with Handle. |
| 1 KEEN KUTTER Block Plane No. KK9½. | 1 KEEN KUTTER Oil Stone, Mounted, No. KM6. |
| 1 KEEN KUTTER Hand Saw No. 88, 22 inch. | 1 KEEN KUTTER Beveled Oil Slip No. KBS. |
| 1 KEEN KUTTER Rip Saw No. 88, 22 inch. | 1 KEEN KUTTER Awl and Tool Set No. 50. |
| 1 KEEN KUTTER Compass Saw No. 95, 12 inch. | 1 each KEEN KUTTER Screw Driver No. 50, 2, 5 and 8 inch. |
| 1 KEEN KUTTER Hack Saw No. 188, 8 inch. | 1 KEEN KUTTER Blue Brand Divider No. 691, 8 inch. |
| 1 KEEN KUTTER Hack Saw Blades No. KR, 8 inch. | 1 KEEN KUTTER Blue Brand Scratch Awl No. 111. |
| 1 KEEN KUTTER Cabinet Saw No. 91, 12 inch. | 1 KEEN KUTTER Blue Brand Brad Awl No. 110. |
| 1 Coping Saw | 1 each KEEN KUTTER Nail Set No. 200, 2/32 and 4/32 inch. |
| 1 KEEN KUTTER Nail Hammer No. K512. | 1 KEEN KUTTER Black Jack Cold Chisel, ¾ inch. |
| 1 KEEN KUTTER Machinists' Hammer No. KM30. | 1 KEEN KUTTER Side Cutting Plier No. 950, 7 inch. |
| 1 KEEN KUTTER Tack Hammer No. K500. | 1 KEEN KUTTER Comb'n. Plier, Nickel Plated, No. 160. |
| 1 KEEN KUTTER Shingling Hatchet No. KNO/1. | 1 KEEN KUTTER Carpenters' Pincer No. 808. |
| 1 KEEN KUTTER Blue Brand Steel Square, 12x18 inch. | 1 KEEN KUTTER Glass Cutter No. 10. |
| 1 KEEN KUTTER Blue Brand Try Square No. 120, 6 inch. | 1 KEEN KUTTER Cabinet Scraper, 3x5 inch. |
| 1 Sliding T Bevel. | 1 KEEN KUTTER Carpenters' Apron No. K. |
| 1 KEEN KUTTER Drawing Knife, 8 inch. | 1 Pair KEEN KUTTER Tinner's Snips No. 9. |
| 1 KEEN KUTTER Ratchet Brace No. 104, 10 inch. | 1 Black Jack Wrench No. BJ, 8 inch. |
| 1 each KEEN KUTTER Special Auger Bit No. KS, 4/16, 5/16, 6/16, 7/16, 10/16, 12/16 and 14/16 inch. | 1 Sure Grip Wrench No. 40. |
| 1 KEEN KUTTER Expansive Bit, large, No. KKL. | 1 Blue Brand Tape Line No. 6050. |
| 1 each KEEN KUTTER Gimlet Bit, German Pattern, 4/32, 6/32 and 8/32 inch. | 1 E. C. Simmons' Carpenters' Pencil No. 107. |
| 1 KEEN KUTTER Countersink Bit No. 113. | 1 E. C. Simmons' Redline Rule No. 620. |
| 1 KEEN KUTTER Countersink Bit No. 114. | 1 Bench Vise. |
| 1 KEEN KUTTER Blue Brand Screw Driver Bit, No. 103. | 1 Marking Gauge. |
| 1 KEEN KUTTER Reamer Bit No. 115. | 1 Boxwood Level. |
| 1 KEEN KUTTER Hand Drill No. K3. | 1 Extra Grade Seasoned 2nd Growth Hickory Mallet. |
| 1 each KEEN KUTTER Special Soc. Fir. Beveled Chisel, ¼, ⅜, ½, ¾, 1 and 1½ inch. | 1 Pair Malleable Carriage Clamps. |
| 1 KEEN KUTTER Socket Firmer Gouge, ½ inch. | 1 Brass Plated Oiler. |
| 1 KEEN KUTTER Mill File, 8 inch, with Handle. | 6 Sheets KEEN KUTTER Sand Paper, Assorted. |
| 1 each KEEN KUTTER Special Slim Taper Files, 4½ and 6 inch, with Handles. | 1 4-oz. Can Klincher Glue. |
| | 1 Spool Wire. |
| | 1 Package Assorted Nails and Brads. |
| | 1 Package Assorted Screws. |
| | 1 Package Tacks. |

Weight of Cabinet with Tools about 97 lbs.; Crated 120 lbs.
One in a Crate.

Heavy Oak Corner Cabinet, with Two Paneled Doors; Three Inside Drawers, 3 inches Deep; Antique Finish, Finely Varnished and Hand Rubbed; Brass Plated Ball Tip Steel Hinges; Two Brass Hangers on Back; Brass Cylinder Lock, with Two Steel Keys; Complete with Outfit of Highest Grade Tools.

Dimensions of Cabinet:

Outside 32 inches High, 26 inches Wide at Front, 7 inches Wide at Back, 5 inches Deep at Side, 13½ inches Deep at Center; Inside 30½ inches High, 24½ inches Wide at Front, 5½ inches Wide at Back, 4 inches Deep at Side, 12 inches Deep at Center.

Each

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**
REGISTERED.

TOOL CABINETS.



Heavy Oak Wall Cabinet, with Two Paneled Doors; Inside Drawer, 3 inches Deep; Antique Finish, Finely Varnished and Hand Rubbed; Brass Plated Ball Tip Steel Hinges; Two Brass Hangers on Back; Brass Cylinder Lock, with Two Steel Keys; Complete with Outfit of Highest Grade Tools.

Dimensions of Cabinet:

Outside -31 inches High, 22½ inches Wide, 8 inches Deep; Inside 29½ inches High, 21 inches Wide, 6½ inches Deep.

KEEN KUTTER*

No. K9—KEEN KUTTER* Wall Cabinet, Complete with Outfit of 50 Highest Grade Tools, etc. Each \$60.00

Contents of No. K9 KEEN KUTTER* Tool Cabinet:

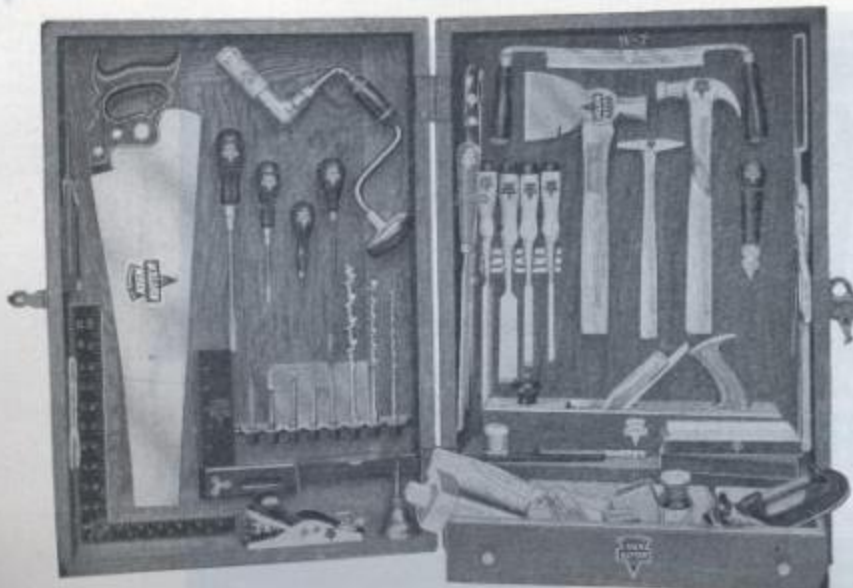
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|--|--|
| 1 KEEN KUTTER Jack Plane No. KK26. | 1 KEEN KUTTER Half Round Cabinet File, 10 inch, with Handle. |
| 1 KEEN KUTTER Block Plane No. KK9½. | 1 KEEN KUTTER Oil Stone, Mounted, No. KM6. |
| 1 KEEN KUTTER Hand Saw No. 88, 22 inch. | 1 KEEN KUTTER Awl and Tool Set No. 50. |
| 1 KEEN KUTTER Compass Saw No. 93, 12 inch. | 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 3 inch. |
| 1 KEEN KUTTER Hack Saw No. 188. | 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 6 inch. |
| 1 Coping Saw | 1 KEEN KUTTER Blue Brand Divider No. 691, 8 inch. |
| 1 KEEN KUTTER Nail Hammer No. K12. | 1 KEEN KUTTER Blue Brand Scratch Awl No. 111. |
| 1 KEEN KUTTER Riveting Hammer No. KR0. | 1 KEEN KUTTER Blue Brand Brad Awl No. 110. |
| 1 KEEN KUTTER Shingling Hatchet No. KNO/1. | 1 KEEN KUTTER Nail Set No. 200. |
| 1 KEEN KUTTER Blue Brand Steel Square No. K10. | 1 KEEN KUTTER Comb'n Plier, Nickel Plated, No. 160. |
| 1 KEEN KUTTER Blue Brand Try Square No. 120, 6 inch. | 1 KEEN KUTTER Glass Cutter No. 10. |
| 1 Sliding T Bevel. | 1 KEEN KUTTER Cabinet Scraper, 3x5 inch. |
| 1 KEEN KUTTER Drawing Knife, 8 inch. | 1 Blue Brand Tape Line No. 6050. |
| 1 KEEN KUTTER Ratchet Brace, 8 inch. | 1 E. C. Simmons' Carpenters' Pencil No. 107. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ¾ inch. | 1 E. C. Simmons' Redline Rule No. 630. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ½ inch. | 1 Marking Gauge. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ¼ inch. | 1 Boxwood Level. |
| 1 KEEN KUTTER Special Auger Bit No. KS, 1 inch. | 1 Never Slip Wrench, 8 inch. |
| 1 KEEN KUTTER Gimlet Bit, German Pattern, 4-32 inch. | 1 Extra Grade Seasoned 2nd Growth Hickory Mallet. |
| 1 KEEN KUTTER Gimlet Bit, German Pattern, 8-32 inch. | 1 Pair Malleable Carriage Clamps, 2½ inch. |
| 1 KEEN KUTTER Countersink Bit No. 113. | 1 Brass Plated Oiler No. 0. |
| 1 KEEN KUTTER Reamer Bit No. 115. | 6 Sheets KEEN KUTTER Sand Paper, Assorted. |
| 1 KEEN KUTTER Blue Brand Screw Driver Bit No. 103. | 1 2-oz. Can Kliner's Glue. |
| 1 KEEN KUTTER Special Soc. Fir. Beveled Chisel, ¼ inch. | 1 Spool Wire No. 28T. |
| 1 KEEN KUTTER Special Soc. Fir. Beveled Chisel, ½ inch. | 1 Package Assorted Nails and Brads. |
| 1 KEEN KUTTER Special Soc. Fir. Beveled Chisel, 1 inch. | 1 Package Assorted Screws. |
| 1 KEEN KUTTER Soc. Fir. Gouge, ½ inch. | 1 Package Tacks. |
| 1 KEEN KUTTER Mill File, 8 inch, with Handle. | |
| 1 KEEN KUTTER Special Slim Taper File, 5½ inch, with Handle. | |

Weight of Cabinet with Tools about 70 lbs.; Crated 88½ lbs.
One in a Crate.

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TRADE MARK
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

TOOL CABINETS.



Heavy Oak Wall Cabinet, with Paneled Box Door; Inside Drawer, 3 inches Deep; Antique Finish, Finely Varnished and Hand Rubbed; Brass Plated Hinges and Hasp; Two Brass Hangers on Back; Polished Brass Padlock, with Two Steel Keys; Complete with Outfit of Highest Grade Tools.

Dimensions of Cabinet:

Outside 27 inches High, 18½ inches Wide, 9 inches Deep; Inside 25½ inches High, 17 inches Wide, 7½ inches Deep.

KEEN KUTTER®

No. K7—KEEN KUTTER® Wall Cabinet, Complete with 44 Highest Grade Tools, etc. Each \$40.00

Contents of No. K7 KEEN KUTTER® Tool Cabinet:

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| 1 KEEN KUTTER Jack Plane No. KJ. | 1 KEEN KUTTER Riveting Hammer No. KR0. |
| 1 KEEN KUTTER Block Plane No. KK9½. | 1 KEEN KUTTER Awl & Tool Set No. 50. |
| 1 KEEN KUTTER Hand Saw No. SS, 20 inch. | 1 KEEN KUTTER Glass Cutter No. 10. |
| 1 KEEN KUTTER Compass Saw No. 93, 12 inch. | 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 3 inch. |
| 1 KEEN KUTTER Nail Hammer No. K12. | 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 6 inch. |
| 1 KEEN KUTTER Shingling Hatchet No. KNS/1. | 1 KEEN KUTTER Blue Brand Scratch Awl No. 111. |
| 1 KEEN KUTTER Ratchet Brace, 8 inch. | 1 KEEN KUTTER Blue Brand Brad Awl, No. 110. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ¾ inch. | 1 KEEN KUTTER Nail Set No. 200. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ½ inch. | 1 KEEN KUTTER Blue Brand Try Square No. 120, 6 inch. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ¼ inch. | 1 Sliding T Bevel. |
| 1 KEEN KUTTER Gimlet Bit, German Pattern, 4-32 inch. | 1 Marking Gauge. |
| 1 KEEN KUTTER Gimlet Bit, German Pattern, 8-32 inch. | 1 Coping Saw No. 100. |
| 1 KEEN KUTTER Drawing Knife, 8 inch. | 1 Sure Grip Wrench No. 40. |
| 1 KEEN KUTTER Special Soc. Fir. Chisel No. SA, ¼ inch. | 1 E. C. Simmons' Carpenters' Pencil No. 107. |
| 1 KEEN KUTTER Special Soc. Fir. Chisel No. SA, ½ inch. | 1 E. C. Simmons' Redline Rule No. 630. |
| 1 KEEN KUTTER Special Soc. Fir. Chisel No. SA, 1 inch. | 1 Rosewood Level. |
| 1 KEEN KUTTER Soc. Fir. Gouge, ½ inch. | 1 KEEN KUTTER Cabinet Scraper, 3x5 inch. |
| 1 KEEN KUTTER Oil Stone, Mounted, No. KM6. | 1 Pair Malleable Carriage Clamps. |
| 1 KEEN KUTTER Countersink Bit No. 113. | 1 Brass Plated Oiler. |
| 1 KEEN KUTTER Blue Brand Screw Driver Bit No. 103. | 6 Sheets KEEN KUTTER Sand Paper, Assorted. |
| 1 KEEN KUTTER Mill File, 8 inch, with Handle. | 1 2-oz. Can Klincher Glue. |
| 1 KEEN KUTTER Special Slim Taper File, 5½ inch, with Handle. | 1 Spool Wire. |
| 1 KEEN KUTTER Blue Brand Steel Square No. K10. | 1 Package Assorted Screws. |
| 1 KEEN KUTTER Blue Brand Divider No. 691, 6 inch. | 1 Package Assorted Nails and Brads. |
| 1 KEEN KUTTER Combination Plier, Nickel Plated, No. 160. | 1 Package Tacks. |

Weight of Cabinet with Tools about 57 lbs.; Crated 72 lbs.

One in a Crate.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

TOOL CABINETS.



KEEN KUTTER*

Heavy Oak Wall Cabinet, with Paneled Box Door; Inside Drawer, 3 inches Deep; Antique Finish, Finely Varnished and Hand Rubbed; Brass Plated Steel Hinges and Hasp; Two Brass Hangers on Back; Polished Brass Padlock, with Two Steel Keys; Complete with Outfit of Highest Grade Tools.

Dimensions of Cabinet:

Outside 26 inches High, 17½ inches Wide, 9 inches Deep. Inside 24½ inches High, 16 inches Wide, 7½ inches Deep.

No. K5—KEEN KUTTER* Wall Cabinet, Complete with 30 Highest Grade Tools, etc..... Each \$24.00

Contents of No. K5 KEEN KUTTER* Tool Cabinet:

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| 1 KEEN KUTTER Jack Plane No. KJ. | 1 Pair KEEN KUTTER Comb'n. Pliers No. 269. |
| 1 KEEN KUTTER Block Plane No. KK120. | 1 KEEN KUTTER Blue Brand Try Square No. 120, 7½ inch. |
| 1 KEEN KUTTER Hand Saw No. 88, 20 inch. | 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 6 inch. |
| 1 KEEN KUTTER Pad Saw No. KP. | 1 KEEN KUTTER Blue Brand Divider No. 691, 6 inch. |
| 1 KEEN KUTTER Blue Brand Nail Hammer No. B12. | 1 KEEN KUTTER Blue Brand Scratch Awl No. 111. |
| 1 KEEN KUTTER Shingling Hatchet No. KS/1. | 1 KEEN KUTTER Blue Brand Brad Awl No. 110. |
| 1 KEEN KUTTER Brace, 8 inch. | 1 KEEN KUTTER Awl and Tool Set No. 50. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ¾ inch. | 1 KEEN KUTTER Cabinet Scraper, 3x5 inch. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ½ inch. | 1 E. C. Simmons' Carpenters' Pencil No. 107. |
| 1 KEEN KUTTER Special Auger Bit No. KS, ¼ inch. | 1 E. C. Simmons' Redline Rule No. 630. |
| 1 KEEN KUTTER Butt Chisel No. E, ½ inch. | 1 Rosewood Level. |
| 1 KEEN KUTTER Butt Chisel No. E, 1 inch. | 1 Marking Gauge. |
| 1 KEEN KUTTER Gimlet Bit, German Pattern, 4-32 inch. | 1 Brass Plated Oiler. |
| 1 KEEN KUTTER Gimlet Bit, German Pattern, 8-32 inch. | 1 2-oz. Can Klincher Glue. |
| 1 KEEN KUTTER Oil Stone No. K6. | 4 Sheets KEEN KUTTER Sand Paper, Assorted. |
| 1 KEEN KUTTER Mill File, 8 inch, with Handle. | 1 Spool Wire No. |
| 1 KEEN KUTTER Special Slim Taper File, 5½ inch, with Handle. | 1 Package Assorted Screws. |
| 1 KEEN KUTTER Nail Set No. 200. | 1 Package Assorted Nails and Brads. |
| | 1 Package Tacks. |

Weight of Cabinet with Tools about 50 lbs.; Crated 63 lbs.

One in a Crate.

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TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

TOOL CABINETS.



KEEN KUTTER*

Heavy Oak Wall Cabinet, with Paneled Door; Antique Finish, Finely Varnished and Hand Rubbed; Brass Plated Steel Hinges and Hasp; Two Brass Hangers on Back; Polished Brass Padlock, with Two Steel Keys; Complete with Outfit of Highest Grade Tools.

Dimensions of Cabinet:

Outside 24 inches High, 16 inches Wide, 6 inches Deep; Inside 22½ inches High, 14½ inches Wide, 4½ inches Deep.

No. K3—KEEN KUTTER* Wall Cabinet, Complete with Outfit of 21 Highest Grade Tools, etc. Each \$17.50

Contents of No. K3 KEEN KUTTER* Tool Cabinet:

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|--|---|
| 1 KEEN KUTTER Smooth Plane No. KS. | 1 KEEN KUTTER Awl and Tool Set No. 50. |
| 1 KEEN KUTTER Panel Saw No. 88, 18 inch. | 1 KEEN KUTTER Nail Set No. 200. |
| 1 KEEN KUTTER Blue Brand Nail Hammer No. B12. | 1 KEEN KUTTER Flat Nose Plier No. 089F, 5 inch. |
| 1 KEEN KUTTER Shingling Hatchet No. KS/1. | 1 KEEN KUTTER Cabinet Scraper, 3x5 inch. |
| 1 KEEN KUTTER Brace, 8 inch. | 1 E. C. Simmons' Carpenters' Pencil No. 107. |
| 1 KEEN KUTTER Auger Bit No. K, ¾ inch. | 1 E. C. Simmons' Redline Rule No. 680. |
| 1 KEEN KUTTER Auger Bit No. K, ½ inch. | 1 Marking Gauge. |
| 1 KEEN KUTTER Gimlet Bit, German Pattern, 4-32 inch. | 1 Brass Plated Oiler |
| 1 KEEN KUTTER Butt Chisel No. E, 1 inch. | 1 2-oz. Can Klincher Glue. |
| 1 KEEN KUTTER Oil Stone No. K6. | 1 Spool Wire |
| 1 KEEN KUTTER Blue Brand Try Square No. 120, 6 inch. | 2 Sheets KEEN KUTTER Sand Paper, Assorted. |
| 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 5 inch. | 1 Package Assorted Screws. |
| 1 KEEN KUTTER Mill File, 8 inch, with Handle. | 1 Package Assorted Nails and Brads. |
| 1 KEEN KUTTER Special Silm Taper File, 5½ inch, with Handle. | 1 Package Tacks. |

Weight of Cabinet with Tools about 32 lbs.; Crated 44 lbs.

One in a Crate.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER;
"BULL DOG,"
REGISTERED

TOOL SETS.



KEEN KUTTER*

Heavy Ash Case, with Hinged Cover; Antique Finish, Finely Varnished and Hand Rubbed; Brass Plated Steel Hinges and Hasp; Polished Brass Padlock, with Two Steel Keys; Complete with Outfit of Highest Grade Tools.

Dimensions of Case:

Outside 27½ inches Long, 9 inches Wide, 5 inches Deep; Inside 26 inches Long, 7½ inches Wide, 3½ inches Deep.

No. K1—KEEN KUTTER* Tool Set, Complete with Outfit of 17 Highest Grade Tools, etc.....\$11.00
Contents of No. K1 KEEN KUTTER* Tool Set:

- 1 KEEN KUTTER Block Plane No. KK120.
- 1 KEEN KUTTER Blue Brand Nail Hammer No. B12.
- 1 KEEN KUTTER Hand Saw No. 88, 18 inch.
- 1 KEEN KUTTER Brace, 8 inch.
- 1 KEEN KUTTER Auger Bit No. K, ¼ inch.
- 1 KEEN KUTTER Auger Bit No. K, ½ inch.
- 1 KEEN KUTTER Gimlet Bit, German Pattern, 4-32 inch.
- 1 KEEN KUTTER Butt Chisel No. E, 1 inch.
- 1 KEEN KUTTER Mill File, 8 inch, with Handle.
- 1 KEEN KUTTER Special Slim Taper File, 5½ inch, with Handle.
- 1 KEEN KUTTER Blue Brand Screw Driver No. 615, 5 inch.
- 1 KEEN KUTTER Flat Nose Plier No. 089F, 5 inch.

- 1 KEEN KUTTER Nail Set No. 200.
- 1 KEEN KUTTER Cabinet Scraper, 3x5 inch.
- 1 E. C. Simmons' Carpenters' Pencil No. 107.
- 1 E. C. Simmons' Redline Rule No. 680.
- 1 Never Slip Wrench, 8 inch.
- 1 2-oz. Can Klincher Glue.
- 2 Sheets KEEN KUTTER Sand Paper, Assorted.
- 1 Spool Wire.
- 1 Coil Picture Wire.
- 1 Package Furniture Nails.
- 1 Package Assorted Screws.
- 1 Package Assorted Nails and Brads.
- 1 Package Tacks.

Weight of Case with Tools about 18 lbs



BULL DOG*.

Stenciled and Labeled Hardwood Box, Cherry Stained, with Hinged Cover, 2 Hooks and Lock with Key; Complete with Outfit of High Grade Tools; Size of Box (inside measurement) 26 inches Long, 7½ inches Wide, 3 inches Deep.

No. 96—BULL DOG*, COMPLETE WITH TOOLS; Weight per set about 17½ lbs.....\$10.00
Per Set

Contents:

- 1 only Fast Mail Panel Saw, No. 999, 22 inch.
- 1 only Sure Grip Bit Brace, No. N/10.
- 1 only Bay State Nail Hammer, No. BS/10½.
- 1 only American German Pattern Gimlet Bit, ½ inch.
- 4 only Cast Steel Auger Bits (1 each, ¼, ½, ¾ and 1 inch).
- 1 only CHIPAWAY Bronzed Half Hatchet, No. CH2.
- 1 only Agricultural Wrench, 8 inch.

- 1 only Boxwood Rule, No. 61.
- 1 Set Awls and Tools, No. 5.
- 1 only Button's Pattern Cutting Pliers, 6 inch.
- 1 only Standard Screw Driver, No. 1, 5 inch.
- 1 only "Leader" Level, No. 150.
- 1 only Iron Block Plane, No. 110B.
- 1 only CHIPAWAY Oil Stone, ¾ lb.

TOOL SETS.



IDEAL.

Stenciled Hardwood Box, with Hinged Cover and Two Hooks; Complete with Outfit of Standard Grade Tools; Size of Box (inside measurement) 26 inches Long, 7 1/4 inches Wide, 3 inches Deep.

Per Set

No. 97—IDEAL, COMPLETE WITH TOOLS; Weight per set about 15 lbs. \$8.00

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- | | |
|---|--|
| 1 only Fast Mail Panel Saw, No. 999, 22 inch. | 1 only Ohio Falls Bronzed Shingling Hatchet, No. OS/1. |
| 1 only Sure Grip Bit Brace, No. N8. | 1 only Agricultural Wrench, 8 inches. |
| 1 only American German Pattern Gimlet Bit, 3/8 inch. | 1 only Boxwood Rule, No. 61. |
| 4 only Cast Steel Auger Bits (1 each, 1/4, 3/8, 1/2 and 5/8 inch. | 1 only Standard Screw Driver, No. 1, 5 inch. |
| | 1 only Scioto Double Smooth Plane. |

Crated.

CANVAS TOOL BAGS.



No. 5/18.



No. 10.

Heavy White Duck Body; Two Leather Fastening Straps; Bright Buckles; Full Copper Riveted; Heavy Sewed and Reinforced.

SATCHEL PATTERN.

Two Round-sewed Leather Handles; Steel Folding Top Frame, with Lock and Key; Leather Bound Edges; Stiffened and Studded Bottom.

	Per Dozen
No. 5/18—18 INCHES LONG, 5 1/2 inches Wide, 16 inches Deep; Weight per dozen about 32 lbs.	\$27.00
No. 5/20—20 INCHES LONG, 5 1/2 inches Wide, 16 inches Deep; Weight per dozen about 39 lbs.	30.00

SHOULDER PATTERN.

13 inch Folding Flap Cover, with Heavy Riveted Duck Carrying Handle; Double Canvas Bottom; Extra Sewed Double Canvas Shoulder Strap, 2 1/2 inches Wide, with Leather Strapped Steel Snap Hook and Ring at Each End.

	Per Dozen
No. 10—16 INCHES LONG, 6 inches Wide, 18 inches Deep; Weight per dozen about 24 lbs.	\$24.00

One Dozen in a Bundle.



BENCHES.

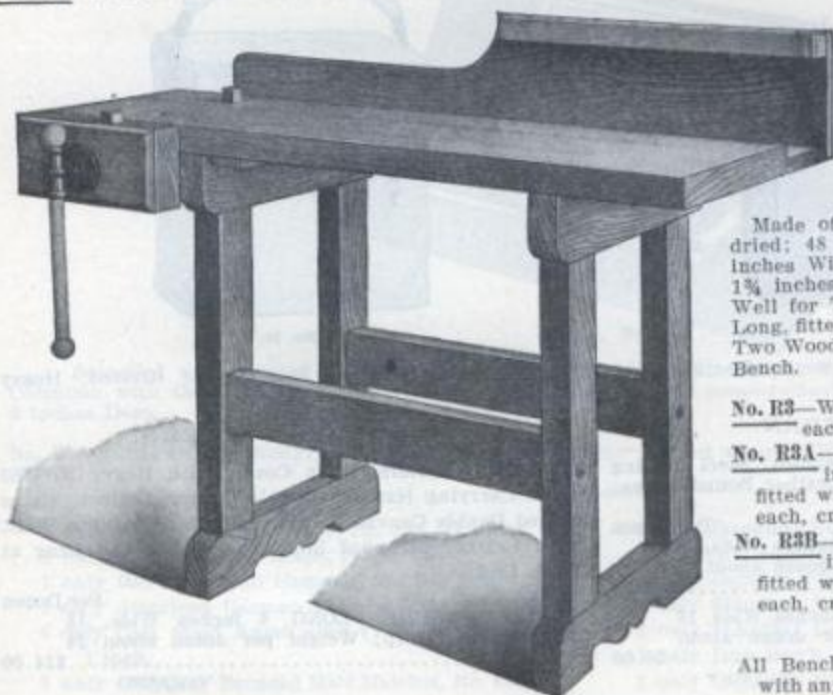
MANUAL TRAINING.



No. T1.

Made of Best Quality Hard Maple, Kiln-dried; 50 inches Long, 32 inches High, 21 inches Wide; Has a Glued-up Top, 2 inches Thick and a Tool Rack for Tools; Has a No. 60 Toles Rapid Acting Vise in front, with 10 inch Jaws which Open 12 inches; Drawers 27 inches Wide, 20 inches Long and 6 inches Deep, fitted with Pulls, Locks and Keys.

No. T1—WITH ONE DRAWER: Weight each, crated, about 128 lbs.	Each
No. T2—WITH TWO DRAWERS: Weight each, crated, about 140 lbs.	\$30.00
	\$5.00



No. R3.

Made of Best Quality Hard Maple, Kiln-dried; 48 inches Long, 32 inches High, 20 inches Wide; Has a 14 inch Glued-up Top, 1 3/4 inches Thick, a Tool Rack and a 6 inch Well for Tools; Wood Front Vise 13 inches Long, fitted with 1 3/4 inch Iron Bench Screw; Two Wood Spring Stops furnished with each Bench.

No. R3—WITHOUT DRAWER: Weight each, crated, about 115 lbs.	Each
No. R3A—WITH ONE DRAWER, 24 inches Wide, 6 inches Deep, fitted with Locks and Keys; Weight each, crated, about 135 lbs.	\$15.00
No. R3B—WITH TWO DRAWERS, 24 inches Wide, 6 inches Deep, fitted with Locks and Keys; Weight each, crated, about 150 lbs.	18.00
One in a Crate.	21.00

All Benches on this page can be equipped with any Vise shown on pages 218 and 219.

MT



BENCHES.



MANUAL TRAINING.

Made of Best Quality Hard Maple, Kiln-dried; 34 inches Long, 32 inches High, 18 inches Wide; Has a 12 inch Glued-up Top, 1 3/4 inches Thick, a Tool Rack and a 6 inch Well for Tools; Wood Front and Tail Vises 13 inches Long, with 1 1/4 inch Wood Bench Screws; Three Wood Spring Stops furnished with each Bench.

No. 697—As Described Above; Weight each, crated, about 110 lbs. Each \$15.00

MANUAL TRAINING.

Made of Best Quality Maple, Kiln-dried; 50 inches Long, 32 inches High, 20 inches Wide; Has a 13 inch Glued-up Top, 1 3/4 inches Thick, a Tool Rack and a 7 inch Well for Tools; Wood Front and Tail Vises 13 inches Long, with 1 1/4 inch Wood Bench Screws; Three Wood Spring Stops furnished with each Bench.



No. 640.

No. 640—As Described Above; Weight each, crated, about 110 lbs. Each \$17.00

No. 648—DOUBLE BENCH; Same in General Construction as No. 640, except 33 inches Wide; Has a 12 inch Glued-up Portion on each Side of a 9 inch Well for Tools; Two Front and Two End Vises; Six Wood Spring Stops furnished with each Bench; Weight each, crated, about 170 lbs. 30.00



CABINET MAKERS'.

Made of Best Quality Hard Maple, Kiln-dried; 60 inches Long, 34 inches High, 22 inches Wide; Has a 13 inch Glued-up Top 2 3/4 inches Thick, and a 9 inch Well for Tools; Wood Front and Tail Vises with 1 1/4 inch Wood Bench Screws.

No. 611—As Described Above; Weight each, crated, about 140 lbs. Each \$21.00
One in a Crate.

All Benches on this page can be equipped with any Vise shown on pages 218 and 219.



BENCHES.

MANUAL TRAINING.



No. G42.

Made of Best Quality Hard Maple, Kiln-dried; 50 inches Long, 32 inches High, 20 inches Wide; Has a 13 inch Glued-up Top $1\frac{3}{4}$ inches Thick, a Tool Rack and a 7 inch Well for Tools; Wood Front and Tail Vises 13 inches Long with $1\frac{1}{2}$ inch Wood Bench Screws; Three Drawers 18 inches Long, 18 inches Wide and $3\frac{1}{4}$ inches Deep; Cupboard 18 $\frac{1}{2}$ inches Long, 14 $\frac{1}{4}$ inches High and 10 inches Wide; Drawers and Door fitted with Locks and Keys; Three Wood Spring Stops furnished with each Bench.

Each

No. G42—As Described Above; Weight each, crated, about 160 lbs. \$30.00

No. G50—DOUBLE BENCH; Same in General Construction as No. G42, except 33 inches Wide; Has a 12 inch Glued-up Portion on Each Side of a 9 inch Well for Tools; Two Front and Two Tail Vises; Single Cabinets, each with Three Drawers and a Cupboard; Drawers 14 inches Long, 15 $\frac{1}{4}$ inches Wide and 4 inches Deep; Cupboards 15 $\frac{1}{4}$ inches Long, 14 $\frac{1}{4}$ inches High and 8 inches Wide; Six Wood Spring Stops furnished with each Bench; Weight each, crated, about 260 lbs. 50.00



Made of Best Quality Hard Maple, Kiln-dried; 50 inches Long, 32 inches High, 20 inches Wide; Has a 13 inch Glued-up Top $1\frac{3}{4}$ inches Thick, a Tool Rack and a 7 inch Well for Tools; No. 7 Herriman Rapid Acting Iron Vise in Front with 7 inch Jaws which Open 8 inches; Drawer 18 inches Long, 30 inches Wide and 6 inches Deep, fitted with Pulls, Lock and Key; One Wood Spring Stop furnished with each Bench.

Each

No. G98—As Described Above; Weight each, crated, about 150 lbs. \$27.00

One in a Crate.

All Benches on this page can be equipped with any Vise shown on pages 218 and 219.

BENCHES.

MANUAL TRAINING.



No. R10D.

Made of Best Quality Hard Maple, Kiln-dried; 48 inches Long, 32 inches High, 20 inches Wide; Has a 14 inch Glued-up Maple Top 2 inches Thick, a Tool Rack Flush with Top of Bench, and a 6 inch Well for Tools; Wood Front and Tail Vises with 1½ inch Iron Bench Screws; Three Wood Spring Stops furnished with each Bench.

No. R10—WITHOUT DRAWER; Weight each, crated, about 140 lbs. \$18.00

No. R10D—WITH DRAWER 30 inches Wide, 18 inches Long and 5 inches Deep, with Brass Pulls, Lock and Key; Weight each, crated, about 170 lbs. 22.00

Made of Best Quality Hard Maple, Kiln-dried; 36 inches Long, 32 inches High, 18 inches Wide; Has a 12 inch Glued-up Maple Top 2 inches Thick, a Tool Rack Flush with Top of Bench, and a 6 inch Well for Tools; Wood Front and Tail Vises with 1 inch Iron Bench Screws; Three Wood Spring Stops furnished with each Bench.

No. R10A—WITHOUT DRAWER; Weight each, crated, about 130 lbs. \$16.00

No. R10AD—WITH DRAWER 16 inches Wide, 19 inches Long and 5 inches Deep, with Brass Pulls, Lock and Key; Weight each, crated, about 145 lbs. 19.00



No. R6A.

Made of Best Quality Hard Maple; 48 inches Long, 32 inches High, 20 inches Wide; Has a 14 inch Glued-up Top 1¾ inches Thick, a Tool Rack and a 6 inch Well for Tools; Wood Front and Tail Vises 12 inches Long, fitted with 1½ inch Iron Bench Screws; Three Wood Spring Stops furnished with each Bench.

All Benches on this page can be equipped with any Vise shown on pages 218 and 219.

No. R6—WITHOUT DRAWER; Weight each, crated, about 135 lbs. \$16.00

No. R6A—WITH ONE DRAWER 24 inches Wide, 18 inches Long, 6 inches Deep, with Brass Pulls, Lock and Key; Weight each, crated, about 160 lbs. 20.00

One in a Crate.



BENCHES.

MANUAL TRAINING.



Made of Best Quality Hard Maple, Kiln-dried and Oiled; 48 inches Long, 32 inches High, 22 inches Wide; Has a 13½ inch Glued-up Top 1½ inches Thick, a Tool Rack and a 7½ inch Well for Tools; Iron, Wood Faced Front and Tail Vises with 10 inch Jaws. Each

No. C/21—As Described Above; Weight each, crated, about 100 lbs. \$14.00



No. C/7,

Made of Best Quality Hard Maple, Kiln-dried and Oiled; 42 inches Long, 32 inches High, 20 inches Wide; Has a 13½ inch Glued-up Top, a Tool Rack and a 5½ inch Well for Tools. Each

No. C/7—WITH WOOD FRONT AND TAIL VISES with 10 inch Jaws; Weight each, crated, about 100 lbs. \$13.00

No. C/70—WITH WOOD FRONT VISE ONLY with 10 inch Jaws; Weight each, crated, about 95 lbs. 11.00

One in a Crate.

All Benches on this page can be equipped with any Vise shown on pages 218 and 219.

BENCHES.

MANUAL TRAINING.



Double Bench; Made of Best Quality Hard Maple, Kiln-dried and Oiled; 48 inches Long, 32 inches High, 36 inches Wide; Has a 13½ inch Glued-up Portion on each side of an 8 inch Well for Tools; Two Front and Two End Wood Visas with 10 inch Jaws.

No. C/14—As Described Above; Weight each, crated, about 150 lbs. Each \$17.50



No. C/15.

Made of Best Quality Hard Maple, Kiln-dried and Oiled; 42 inches Long, 32 inches High, 22 inches Wide; Has a 14 inch Glued-up Top 2¾ inches Thick, a Tool Rack and a 6 inch Well for Tools; a No. 7 Herriman Rapid Acting Vise in Front with 7 inch Jaws which Open 9 inches.

No. C/15—WITHOUT DRAWER; Weight each, crated, about 135 lbs. Each \$16.50

No. C/16—WITH ONE DRAWER 23 inches Wide, 19 inches Long and 6 inches Deep; Weight each, crated about 150 lbs. 18.50

One in a Crate.

All Benches on this page can be equipped with any Vise shown on pages 218 and 219.



BENCHES.

MANUAL TRAINING.



Double Bench; Made of Best Quality Hard Maple, Kiln-dried; Top Shellaced and Cabinet Varnished; 60 inches Long, 32 inches High, 36 inches Wide; Glued-up Top $1\frac{3}{4}$ inches Thick; Two Front Vises No. 20 Abernathy Rapid Acting with 10 inch Jaws; Two Wood Tail Vises with 10 inch Jaws; Single Cabinets each with 3 Drawers and a Cupboard; Drawers 20 inches Long, $16\frac{1}{2}$ inches Wide and 6 inches Deep; Cupboard $6\frac{1}{2}$ inches Long, $17\frac{1}{2}$ inches Wide and 21 inches High; Drawers fitted with Locks and Keys.

No. C/17—As Described Above; Weight each, crated, about 300 lbs Each \$55.00



Made of Best Quality Hard Maple, Kiln-dried; Top Shellaced and Cabinet Varnished; 48 inches Long, 32 inches High, 22 inches Wide; Has a $1\frac{3}{4}$ inch Glued-up Top $1\frac{3}{4}$ inches Thick, a Tool Rack and a $7\frac{1}{2}$ inch Well for Tools; Wood Front and Tail Vises with 10 inch Jaws; 3 Drawers $16\frac{1}{2}$ inches Long, $15\frac{1}{2}$ inches Wide and 4 inches Deep; One Cupboard 18 inches Long, 9 inches Wide and 18 inches High; Drawers fitted with Locks and Keys.

No. C/13—As Described Above; Weight each, crated, about 150 lbs Each \$23.00

One in a Crate.

All Benches on this page can be equipped with any Vise shown on pages 218 and 219.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

BENCH PLANES.

KEEN KUTTER®

SELECTED AND SEASONED BEECHWOOD, FINELY VARNISHED; Ebonized Hardwood Knobs; Double Cutters, Forged from Highest Grade Crucible Steel, Oil Tempered, Full Polished, Sharpened and Whetted on an Oil Stone by Hand, READY FOR USE.



No. KS—SMOOTH; Length 8 inches; Size of Cutters, Assorted, 2, 2½ and 2¾ inches; Weight each about 2 lbs. \$1.25



No. KHS—HANDLED, SMOOTH; Length 9½ inches; Size of Cutters, Assorted, 2, 2½ and 2¾ inches; Weight each about 2½ lbs. \$2.00



No. KJ—JACK; Length 15 inches; Size of Cutters, Assorted, 2½ and 2¾ inches; Weight each about 4 lbs. \$1.50



No. KRJ—JACK; RAZEE PATTERN; Length 15 inches; Size of Cutters, Assorted, 2½ and 2¾ inches; Weight each about 3½ lbs. \$1.70

One in a Cardboard Box.



No. KF—FORE; Length 20 inches; Size of Cutters, Assorted 2½ and 2¾ inches; Weight each about 5½ lbs. \$2.25



No. KRF—FORE; RAZEE PATTERN; Length 20 inches; Size of Cutters, Assorted 2½ and 2¾ inches; Weight each about 4¼ lbs. \$2.45



JOINTER; Size of Cutters, Assorted 2½ and 2¾ inches. Each

No. KP26—LENGTH 26 INCHES. \$2.00

No. KP28—LENGTH 28 INCHES. 2.20

No. KP30—LENGTH 30 INCHES. 2.30

Weight Each about 7 lbs.



No. KRP26—JOINTER; RAZEE PATTERN; Length 26 inches; Size of Cutters, Assorted 2½ and 2¾ inches; Weight each about 4½ lbs. \$2.20

FANCY WOOD PLANES.



Hollow Plane.

BEECHWOOD, PLAIN FINISH; Cutters Forged from Tool Steel, Tempered and Polished; Average Length 9½ inches.

In ordering half pairs of Hollows and Rounds, be careful to give number of Plane, and whether Hollow or Round. For instance, if a Plane as per above cuts is wanted, say "one No. 72, ¾-inch HOLLOW," or one No. 72, ¾-inch ROUND," and thus avoid confusion.

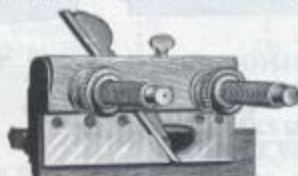
No. 72F—HOLLOWS AND ROUNDS.

Size, inches	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2
Weight per pair about, lbs.	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
Per pair	\$1.00	1.00	1.00	1.00	1.00	1.15	1.15	1.15

Each Plane Cuts only

One Size.

Packed Loose.



PANEL PLOW.

Each

No. 95—With 8 Cutters, One each, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 inch. \$5.50

Packed Loose; Weight Each about 3½ lbs.



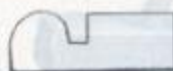
Each

No. 96½—Handled, with 8 Cutters, One each, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 inch. \$6.50

No. 97—Handled, Box Fence with 8 Cutters, One each, 1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8 inch. 6.85

FANCY WOOD PLANES.

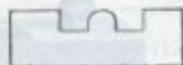
BEECHWOOD, PLAIN FINISH; Cutters Forged from Tool Steel, Tempered and Polished.



BEAD.

No. 37F—Single Boxed.

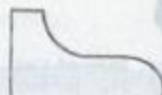
Size, in. . .	1/8	3/16	1/4	5/16
Each.	\$0.50	.50	.50	.50
Size, inches. .	3/8	1/2	3/4	
Each.	\$0.50	.50	.55	



BEAD.

No. 41F—Double Boxed Center.

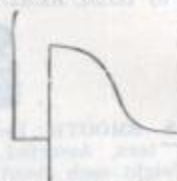
Size, in. . .	3/16	1/4	5/16
Each.	\$0.60	.60	.60
Size, inches. .	3/8	1/2	
Each.	\$0.60	.60	



REVERSE OGEE.

No. 62F.

Size, inches. .	3/4	7/8	1
Each.	\$0.75	.75	.75



ROMAN OGEE, Reverse, with Fence.

No. 62 1/4

Size, inches. .	3/4	1
Each.	\$0.90	.90

Weight Each about 1 lb.

Each Plane Cuts Only One Size.



No. 116—SKEW RABBIT.

Size, inches.	3/4	1	1 1/4
Wgt. each about, lbs. .	1	1 1/4	1 1/4
Each.	\$0.60	.60	.65
Size, inches.	1 1/2	1 3/4	2
Wgt. each about, lbs. .	1 1/2	2	2
Each.	\$0.70	.80	.90



SKEW RABBIT, With Handle and Two Side Cutters.

No. 119—WITH HANDLE ON TOP.

Size, inches.	1 1/2	2
Each.	\$1.70	1.70

No. 119 1/2—WITH HANDLE ON SIDE.

Size, inches.	1 1/2	1 3/4	2
Each.	\$1.90	1.90	1.90

Weight each about 3 lbs.



No. 48F—DADO, With Brass Screw Top.

Size, inches.	3/4	1	1 1/4
Each.	\$1.50	1.50	1.50
Size, inches.	3/4	1	
Each.	\$1.50	1.50	

Weight each about 1 1/4 lbs.



No. 75F—MATCH.

Size, in.	1/2	3/4	1
Per pair.	\$1.50	1.50	1.50
Size, inches.	3/4	1	
Per pair.	\$1.50	1.50	

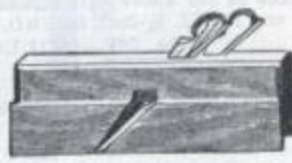
Weight each about 2 1/2 lbs.



No. 53—FILLETSTER, With Cutter and Brass Side Stop.

Size, inches.	1 1/4
Each.	\$1.40

Weight each about 3 lbs.



No. 91—NOSING; 2 Irons.

Size, in.	3/4	7/8	1
Each.	\$1.10	1.10	1.10

Size, in.	1 1/4	1 1/2	1 3/4
Each.	\$1.10	1.10	1.20

Weight each about 1 1/2 lbs.



No. 30F—TOOTH.

Size, inches.	2 1/4
Each.	\$1.00

Weight each about 1 1/2 lbs.

Packed Loose.

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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

ADJUSTABLE PLANES.

KEEN KUTTER*

SELECTED AND SEASONED BEECHWOOD
BOTTOMS; Knobs and Handles, Finely Varnished;
Cast Iron Frames Enamelled Black; Full Polished
Caps; CUTTERS ARE EXTRA
HEAVY, which prevents "Chatter-
ing" when used on very hard wood
or knots; Made of Highest Grade
Crucible Steel, Oil Tempered, Full
Polished, SHARPENED AND
WHETTED ON AN OIL STONE
BY HAND, READY FOR USE;
Finest Screw and Lever Adjust-
ment.



WOOD BOTTOM.

Nos.	KK23	KK24	Nos.	KK35	KK36
Style	SMOOTH	SMOOTH	Style	HLD. SMOOTH	HLD. SMOOTH
Length, inches	9	8	Length, inches	9	10
Size of Cutter, inches	1 3/4	2	Size of Cutter, inches	2	2 3/4
Weight each about, lbs.	3 3/4	3 3/4	Weight each about, lbs.	3 3/4	4 1/2
Each	\$1.35	1.35	Each	\$1.70	1.85

The Wood Parts are Selected,
Well Seasoned and Varnished,
will not Crack, Check or Warp.



The Planes which are used on
Hard Wood are much more ef-
fective if they have a Strong
Heavy Thick Cutter, as in the
case of our KEEN KUTTER Iron
Planes.

WOOD BOTTOM.

Nos.	KK26	KK27	KK28	KK29	KK30	KK31	KK32	KK33
Style	JACK	JACK	FORE	FORE	JOINTER	JOINTER	JOINTER	JOINTER
Length, inches	15	15	18	20	22	24	26	28
Size of Cutter, inches	2	2 1/2	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4	2 3/4
Weight each about, lbs.	4 1/2	5	6 1/4	6 1/2	7	7 1/2	8	8 3/4
Each	\$1.50	1.70	1.85	1.85	2.00	2.00	2.20	2.20

IRON.

FINELY ENAMELED CAST IRON FRAMES; Bottoms Perfectly True and
Smooth; Finely Varnished Rosewood Handles and Knobs; Full Polished Caps;
CUTTERS ARE EXTRA HEAVY, which prevents "Chattering" when used on very
hard wood or knots; Made of Highest Grade Crucible Steel, Oil Tempered, Full
Polished, SHARPENED AND WHETTED ON
AN OIL STONE BY HAND, READY FOR
USE; Finest Screw and Lever Adjustments.



Corrugated Bottom.



IRON, SMOOTH BOTTOM.

Nos.	KK3	KK4	KK4 1/2	Nos.	KK5	KK5 1/2	KK6	KK7	KK8
Style	SMOOTH	SMOOTH	SMOOTH	Style	JACK	JACK	FORE	JOINTER	JOINTER
Length, inches	8	9	10	Length, in.	14	15	18	22	24
Size of Cutter, inches	1 1/4	2	2 3/4	Size Cutter, in.	2	2 1/4	2 3/4	2 3/4	2 3/4
Weight each about, lbs.	3 1/2	3 3/4	4 1/2	Wgt. abt., lbs.	4 3/4	5	7	7 1/2	9 1/4
Each	\$2.00	2.20	2.50	Each	\$2.50	2.85	3.20	3.65	4.35

IRON, CORRUGATED BOTTOM.

Nos.	KK3C	KK4C	KK4 1/2 C	Nos.	KK5C	KK5 1/2 C	KK6C	KK7C	KK8C
Style	SMOOTH	SMOOTH	SMOOTH	Style	JACK	JACK	FORE	JOINTER	JOINTER
Length, inches	8	9	10	Length, in.	14	15	18	22	24
Size of Cutter, inches	1 1/4	2	2 3/4	Size Cutter, in.	2	2 1/4	2 3/4	2 3/4	2 3/4
Weight each about, lbs.	3 1/2	3 3/4	4 1/2	Wgt. abt., lbs.	4	5	7	7 1/2	9 1/4
Each	\$2.00	2.20	2.50	Each	\$2.50	2.85	3.20	3.65	4.35

One in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

IRON BLOCK PLANES.

KEEN KUTTER®

FINELY ENAMELED CAST IRON FRAMES and Caps; Bottoms Perfectly True and Smooth; Cutters made of Highest Grade Crucible Steel; Oil Tempered, Full Polished, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE; Finest Screw and Lever Adjustments.



No. KK9 1/2—With Screw, Lever and Throat Adjustments; LENGTH 6 INCHES; Size of Cutter 1 1/4 inches; Weight each about 1 1/2 lbs. \$1.60

No. KK15—With Screw, Lever and Throat Adjustments; LENGTH 7 INCHES; Size of Cutter 1 1/4 inches; Weight each about 1 1/2 lbs. 1.70



No. KK110—NOT ADJUSTABLE; Length 7 1/2 inches; Size of Cutter 1 1/4 inches; Weight each about 1 1/2 lbs. \$0.70



No. KK102—With Lever Adjustment; Length 5 1/2 inches; Size of Cutter 1 1/4 inches; Weight about 1 lb. \$0.70



LOW ANGLE.
No. KK60—With Screw Adjustment; LENGTH 6 INCHES; Size of Cutter 1 1/4 inches; Weight each about 1 1/4 lbs. \$1.75
No. KK65—With Screw Adjustment; LENGTH 7 INCHES; Size of Cutter 1 1/4 inches; Weight each about 1 1/4 lbs. 1.90



No. KK9 3/4—With Screw, Lever and Throat Adjustments; Rosewood Handle; Length 6 in.; Size of Cutter 1 1/4 in.; Weight each about 1 1/4 lbs. \$1.85

The name "KEEN KUTTER" the Wide World over stands for Quality and the Universal Popularity of our "KEEN KUTTER" Planes proves them worthy of the name.



No. KK120—With Lever Adjustment; Length 7 1/2 inches; Size of Cutter 1 1/4 inches; Weight each about 1 1/4 lbs. \$0.95



DOUBLE ENDER.
No. KK130—REVERSIBLE; NOT ADJUSTABLE; Length 8 inches; Size of Cutter 1 1/4 inches; Weight each about 2 lbs. \$1.00



KNUCKLE JOINT.
No. KK18—With Screw, Lever and Throat Adjustments; Nickel Plated Trimmings; Length 6 inches; Size of Cutter 1 1/4 inches; Weight each about 1 1/4 lbs. \$1.85

No. KK19—With Screw, Lever and Throat Adjustments; Nickel Plated Trimmings; Length 7 inches; Size of Cutter 1 1/4 inches; Weight each about 1 1/2 lbs. 1.95



No. KK102—NOT ADJUSTABLE; Length 5 1/2 inches; Size of Cutter 1 1/4 inches; Weight each about 1 lb. \$0.55



No. KK220—With Screw Adjustment; Length 7 1/2 inches; Size of Cutter 1 1/4 inches; Weight about 1 1/2 lbs. \$0.95



RABBIT AND BLOCK.
No. KK140—With Lever Adjustment; Length 7 inches; Size of Cutter 1 1/4 inches; Weight each about 1 1/4 lbs. \$1.60

One in a Cardboard Box.

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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

ADJUSTABLE PLANES.

KEEN KUTTER*; IRON.

Cast Iron Frames; Bottoms Perfectly True and Smooth; Cutters Made of Highest Grade Crucible Steel, Oil Tempered; Full Polished, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE.

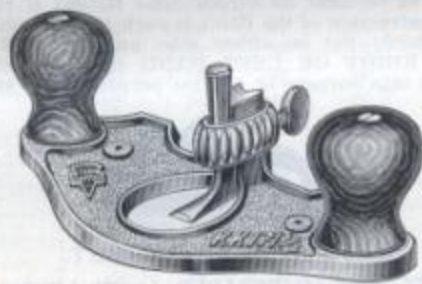


ROUTER.

No. KK71—Nickel Plated Frame; Length 7½ inches; Two Cutters, Size ¼ and ½ inch; Weight each about 2½ lbs. \$1.85

The Cutters can be Clamped to the Back of Upright Post and Outside of Stock; in this position THEY WILL REACH INTO CORNERS, route out mortises or smooth surfaces hard to reach with other tools.

The Small Attachment in cut is furnished with each Plane and can be substituted for the Collar that holds the Cutter when the work requires a Plane with a Closed Throat.



ROUTER, WITH CLOSED THROAT.

No. KK171½—Nickel Plated Frame; Length 7½ inches; Two Cutters, Size ¼ and ½ inch; Weight each about 2 lbs. \$1.50



VENEER SCRAPER.

No. KK212—With Screw Adjustment; Adjustable to Any Angle; Finely Varnished Handles; Length 5¼ inches; Size of Cutter 3 inches; Weight each about 1 lb. \$2.25
Takes same Cutters as Scraper Plane No. KK312, shown on this Page.

One in a Cardboard Box.



IMPROVED SCRUB.

No. KK240—NOT ADJUSTABLE; Length 9½ inches; Size of Cutter 1¼ inches; Weight each about 2 lbs. \$1.00
This Plane is Particularly Adapted for Roughing down work before using a Jack or other Plane, having a Single Iron with Cutting Edge Rounded.



SCRAPER.

No. KK312—With Screw Adjustment; Knob and Handle Finely Varnished; Length 9 inches; Size of Cutter 3 inches; Weight each about 4½ lbs. \$2.00
Extra Cutters for No. KK312 Scraper; Size 3 inches; Weight each about ¼ lb.20

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

ADJUSTABLE PLANES.

KEEN KUTTER*, IRON.

FINELY ENAMELED CAST IRON FRAMES; Bottoms Perfectly True and Smooth; Cutters made of Highest Grade Crucible Steel, Oil Tempered, Full Polished, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE.



CARRIAGE MAKERS' RABBET.

Finely Varnished Rosewood Handles and Knobs; Full Polished Caps; CUTTERS ARE EXTRA HEAVY, which prevents "CHATTERING" WHEN USED ON VERY HARD WOOD OR KNOTS.

Each

No. KK10½—With Screw and Lever Adjustments; Length 9 inches; Size of Cutter 2½ inches; Weight each about 3½ lbs. \$2.50

No. KK10—With Screw and Lever Adjustments; Length 13 inches; Size of Cutter 2½ inches; Weight each about 4¼ lbs. 3.00



RABBET, WITH SPUR.

Each

No. KK190—NOT ADJUSTABLE; Length 8 inches; Width of Cutter 1½ inches; Weight each about 2½ lbs. \$1.15

No. KK191—NOT ADJUSTABLE; Length 8 inches; Width of Cutter 1½ inches; Weight each about 2½ lbs. 1.15

No. KK192—NOT ADJUSTABLE; Length 8 inches; Width of Cutter 1 inch; Weight each about 2 lbs. 1.15

Will lie perfectly flat on either side, and CAN BE USED WITH RIGHT OR LEFT HAND equally well, while planing into corners or against perpendicular surfaces.



RABBET AND FILLETSTER.

Each

No. KK78—Length 8½ inches; Size of Cutter 1½ inches; Weight each about 2½ lbs. \$1.50

By removing the Arm to which the Fence is secured, a Handled Rabbet Plane is had, with Two Seats for the Cutter, to be used as a Bull Nose Rabbet if required. The construction of the Stock is such that the plane will lie perfectly flat on either side, and CAN BE USED WITH RIGHT OR LEFT HAND equally well while Planing into corners or against perpendicular surfaces.



BULL NOSE RABBET.

Each

No. KK75—NOT ADJUSTABLE; Length 4 inches; Size of Cutter 1 inch; Weight each about ¾ lb. \$0.55



STEEL CIRCULAR.

Each

No. KK115—With Screw and Lever Adjustments; Full Polished Caps; CUTTERS ARE EXTRA HEAVY, which prevents "CHATTERING" WHEN USED ON VERY HARD WOOD OR KNOTS; Length 10 inches; Size of Cutter 1½ inches; Weight each about 3¼ lbs. \$2.75

One in a Cardboard Box.

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TRADE MARK
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

±EXTRA PARTS FOR KEEN KUTTER* PLANES.

FOR ILLUSTRATION OF PARTS SEE PAGE 166C.

±FOR KEEN KUTTER* WOOD BOTTOM PLANES.

For Planes Number	±Bottom No. 15	±Frog Complete No. 1	±Cap No. 2	±Handle No. 11	±Knob No. 13	±Handle Bolt No. 12	±Adjusting Nut No. 8	±Top Casting No. 16	±Frog Screw No. 37	±Cap Screw No. 18
Each	Each	Each	Each	Each	Each	Each	Each	Each	Dozen	Dozen
KK23	\$0.75	\$0.55	\$0.35	.....	\$0.20	\$0.10	\$0.15	\$0.35	\$0.70	\$0.70
KK24	.75	.55	.35	.....	.20	.10	.15	.35	.70	.70
KK26	.90	.55	.35	\$0.20	.20	.10	.15	.35	.70	.70
KK27	.90	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK28	1.25	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK29	1.25	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK30	1.48	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK31	1.48	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK32	1.55	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK33	1.55	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK35	.75	.55	.35	.20	.20	.10	.15	.35	.70	.70
KK36	.90	.55	.35	.20	.20	.10	.15	.35	.70	.70

±FOR KEEN KUTTER* BLOCK PLANES.

For Planes Number	±Bottom No. 20	±Bottom No. 21	±Cap No. 24	±Knob No. 25	±Knob No. 35	±Adjust- ing Frog No. 31	±Adjust- ing Lever No. 28	±Adjust- ing Lever No. 41	±Mouth Piece No. 22	±Throat Adj. No. 38	±Adjust- ing Screw No. 26	±Lateral Adj. Lever No. 33	±Adjust- ing Nut No. 46
Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each
KK9 ¹ / ₂	\$1.20	\$1.20	\$0.20	\$0.15	\$0.15	.....	\$0.10	\$0.10	\$0.25	\$0.20	.....	\$0.20	\$0.20
KK9 ³ / ₄	1.20	1.20	.20	.15	.15	.....	.10	.10	.25	.20	.....	.20	.20
KK15	1.30	1.30	.20	.15	.15	.....	.10	.10	.25	.20	.....	.20	.20
KK18	1.20	1.20	.40	.15	.15	.....	.10	.10	.25	.20	.....	.20	.20
KK19	1.20	1.20	.40	.15	.15	.....	.10	.10	.25	.20	.....	.20	.20
KK60	1.10	1.10	.30	.20	.20	.20	.....	.....	.25	.20	.20	.....	.....
KK65	1.30	1.30	.30	.20	.20	.20	.....	.....	.25	.20	.20	.....	.....
KK102	.30	.30	.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
KK103	.45	.45	.20	.....	.....	.....	.10	.10	.....	.....	.....	.....	.....
KK110	.50	.50	.20	.20	.20	.....	.....	.....	.....	.....	.....	.....	.....
KK120	.60	.60	.20	.20	.20	.....	.10	.10	.....	.....	.....	.....	.....
KK130	.60	.60	.20	.20	.20	.....	.....	.....	.....	.....	.....	.....	.....
KK140	1.30	1.30	.30	.20	.20	.....	.10	.10	.....	.....	.....	.....	.....
KK220	.60	.60	.20	.20	.20	.20	.....	.....	.....	.....	.20	.....	.....

±FOR KEEN KUTTER* CIRCULAR PLANES.

For Plane Number	±Bottom	±Frog Complete	±Cap	±Handle	±Top Casting	±Adjusting Nut	±Frog Screw	±Cap Screw
Each	Each	Each	Each	Each	Each	Each	Dozen	Dozen
KK115	\$0.65	\$0.40	\$0.25	\$0.15	\$1.10	\$0.08	\$0.40	\$0.40

±FOR KEEN KUTTER* IRON RABBIT PLANES.

For Planes Number	±Bottom	±Cap	±Depth Gauge	±Fence	±Spurs and Screws
Each	Each	Each	Each	Each	Dozen
KK190	\$0.90	\$0.10	\$0.20	.....	\$0.60
KK191	.90	.10	.20	.....	.60
KK192	.90	.10	.20	.....	.60
KK198	1.00	.10	.20	.25	.60

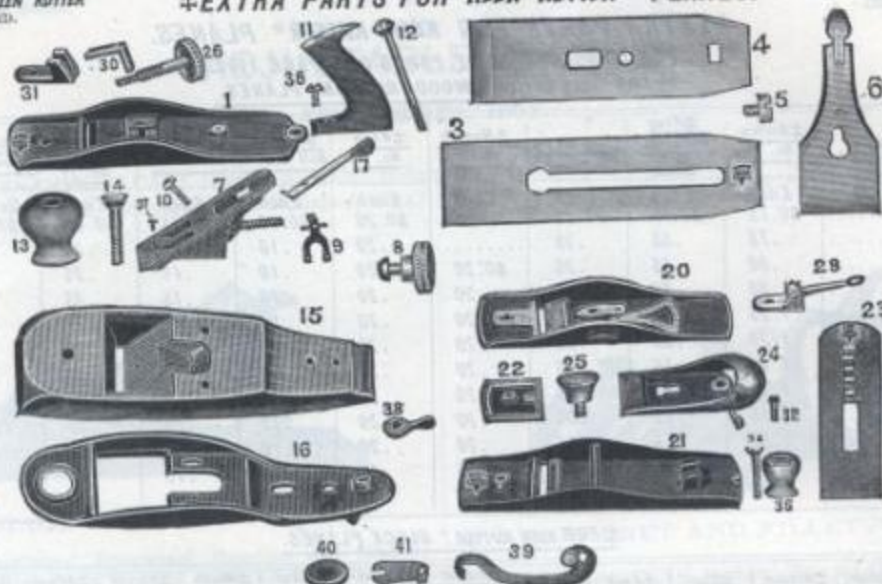
Packed Loose.

In ordering above Parts be particular to give Number of Plane for which Part is wanted.
Extra Parts can be sent by Mail or Express at slight cost.

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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

EXTRA PARTS FOR KEEN KUTTER* PLANES.



LIST SHOWING NAMES OF DIFFERENT PARTS.

PARTS OF KEEN KUTTER* ADJUSTABLE IRON AND WOOD BOTTOM PLANES.

- No. 1—Bottom (Iron Plane).
No. 3—Plane Iron.
No. 4—Plane Iron Cap.
No. 5—Plane Iron Screw.
No. 6—Cap.
No. 7—Frog.
No. 8—Brass Adjusting Nut.
No. 9—Y* Adjusting Lever.
No. 10—Cap Screws.
No. 11—Handle.
No. 12—Handle Bolt.
No. 13—Knob.
No. 14—Knob Bolt.
No. 15—Bottom (Wood Plane).
No. 16—Top Casting (Wood Plane).
No. 17—Lateral Adjusting Lever.
No. 36—Handle Screw.
No. 37—Frog Screw.

PARTS OF KEEN KUTTER* BLOCK PLANES.

- No. 20—Bottom (Adjustable Throat).
No. 21—Bottom.
No. 22—Mouth Piece.
No. 23—Plane Iron.
No. 24—Cap.
No. 25—Brass Knob.
No. 26—Adjusting Screw.
No. 28—Adjusting Lever.
No. 30—Sliding Lever.
No. 31—Adjustable Frog.
No. 32—Cap Screw.
No. 34—Knob Bolt.
No. 35—Wood Knob.
No. 38—Throat Adjusting Lever.
No. 39—Lateral Adjusting Lever.
No. 40—Adjusting Nut.
No. 41—Longitudinal Adjusting Lever.

FOR KEEN KUTTER* IRON PLANES.

For Planes Number	Bottom No. 1	Frog Complete No. 7	Cap No. 4	Handle No. 11	Knob No. 13	Handle Bolt No. 12	Adjusting Nut No. 8	Frog Screw No. 17	Cap Screw No. 10
KK3 or KK3C	Each \$1.80	Each \$0.65	Each \$0.45	Each \$0.35	Each \$0.27	Each \$0.10	Each \$0.15	Dozen \$0.70	Dozen \$0.70
KK4 or KK4C	1.80	.65	.45	.35	.27	.10	.15	.70	.70
KK4 ¹ / ₂ or KK4 ¹ / ₂ C	2.20	.65	.45	.35	.27	.10	.15	.70	.70
KK5 or KK5C	2.20	.65	.45	.35	.27	.10	.15	.70	.70
KK5 ¹ / ₂ or KK5 ¹ / ₂ C	2.20	.65	.45	.35	.27	.10	.15	.70	.70
KK6 or KK6C	3.00	.65	.45	.35	.27	.10	.15	.70	.70
KK7 or KK7C	4.25	.65	.45	.35	.27	.10	.15	.70	.70
KK8 or KK8C	5.25	.65	.45	.35	.27	.10	.15	.70	.70
KK10	3.00	.65	.45	.35	.27	.10	.15	.70	.70
KK10 ¹ / ₂	2.75	.65	.45	.35	.27	.10	.15	.70	.70
KK212	2.20	.65	.45	.35	.27	.10	.15		
KK312	2.20	.65	.35	.35	.27	.10			
KK240	1.25		.20	.30	.27	.10			

Packed Loose.

In Ordering above Parts be particular to give Number of Plane for which Part is wanted.
Extra Parts can be sent by Mail or Express at slight cost.

ADJUSTABLE PLANES.

STANLEY'S.



CHAMFER.

CAST IRON FRAMES
AND CAPS; Tempered and
Polished Tool Steel Cut-
ters.

Each

No. 72—Japanned; Length 9 inches; Size of Cutter 1 1/8 inches; Weight each about 3 1/2 lbs.. \$2.20



CHAMFER.

Each

No. 72 1/2—Japanned, WITH BEADING AND
MOULDING ATTACHMENT; Length 9
inches; Size of Cutter 1 1/8 inches; Weight each
about 4 1/4 lbs. \$3.30



COMBINED BEADING AND MATCHING.

Each

No. 50—NICKEL PLATED; Length 9 inches, In-
cludes Beading Cutters 3/8, 5/16, 1/4, 5/16, 3/8,
7/16 and 1/2 inch, and One Pair of 1/4 inch
Matching Cutters; Weight each about 3 lbs.. \$4.50

One in a Cardboard Box.



TONGUING AND GROOVING.

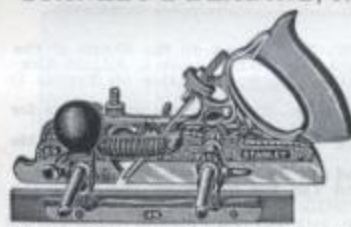
Each

No. 48—NICKEL PLATED; Length 10 1/2 inches;
for Boards 3/4 to 1 1/4 inches Thick; Weight
each about 3 lbs. \$2.75

COMBINED.

NICKEL PLATED CAST IRON FRAMES; Mahogany Handles, Tempered and Polished Tool Steel Cutters.
STANLEY'S BEADING, Rabbet and Slitting.

TRAUT'S ADJUSTABLE DADO, PLOW, etc.



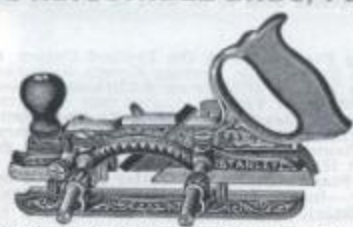
No. 45—Length
11 inches;
Weight each
about 9 1/4 lbs. \$9.00
This Plane embraces
a Beading and
Center Beading Plane,
Rabbet and Filletster,
Dado, Plow, Matching

Plane, Superior Slitting Plane and Sash Plane.

Each Plane has Seven Beading Tools (3/8, 5/16, 1/4,
5/16, 3/8, 7/16, and 1/2 inch); Ten Plow and Dado Bits
(3/8, 5/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, and 1 inch); a
Slitting Blade, a Sash Tool and Tonguing Tool.

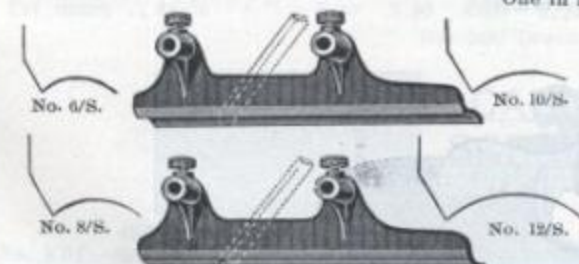
Planes Nos. 45 and 46 combine a Main Stock and a Sliding Section so arranged that Cutters of Different Widths can be used.
Each Plane is fitted with Adjustable Fence or Guide and a Depth Gauge, and also with Spurs for use in working across the Grain.
Can be Used Right or Left Hand.

One in a Wood Box.



Each

No. 46—Length 10 inches; Weight each about 5 1/4
lbs. \$8.00
Complete with Eight Plow and Dado Bits (3/8, 1/4,
5/16, 3/8, 1/2, 5/8, 3/4, and 1 1/4 inch), a Filletster Cutter, a
Tonguing Tool and a Slitting Tool.

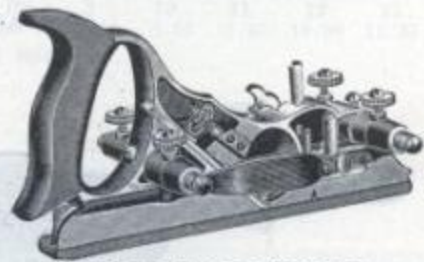


HOLLOWS AND ROUNDS.

Japanned Cast Iron, Polished Faces, Steel Set
Screws. For use on Stanley's Plane No. 45.

Nos.	6/S	8/S	10/S	12/S
Cutter, wide, inch.....	1/2	3/4	1	1 1/4
Works, circle, inch.....	3/8	1	1 1/4	1 3/4
Per pair	\$1.50	1.50	1.50	1.50

One in a Cardboard Box; Weight each about 2 lbs.



SIEGLEY'S COMBINED.

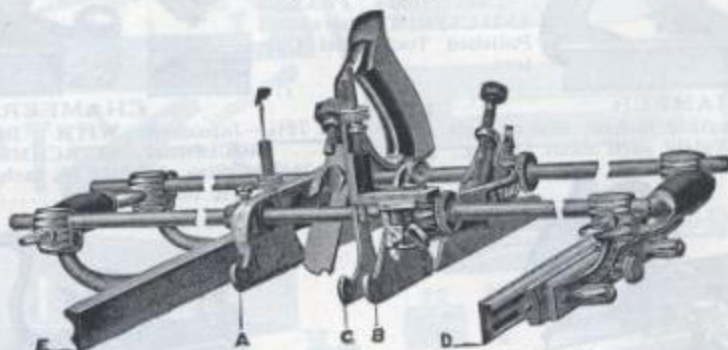
Each

No. 2/S—NICKEL PLATED Cast Iron Frame;
Mahogany Handle; Steel Adjusting
Screws; Tempered and Polished Tool Steel
Cutters; Weight each about 7 1/2 lbs. \$8.00
This Tool is a Combination Plow, Dado, Side and
Center Bead Plane. It includes the following Bits:
Plow Bits, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 1 inch;
Bead Plane Bits, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2 inch; Match
Bit, 3/4 inch. One in a Wood Box.

ADJUSTABLE PLANES.

COMBINED.

This Tool, in the Hands of an Ordinary Carpenter, can be Used for All Lines of Work covered by a full assortment of so-called Fancy Planes.



STANLEY'S PATENT UNIVERSAL.

Each

No. 55—NICKEL PLATED CAST IRON FRAME; Mahogany Handles; Steel Adjusting Screws; With 52 Tempered and Polished Tool Steel Cutters; Weight each about 15½ lbs.....\$18.00

The 52 Cutters are arranged in four separate cases.

This Plane consists of:—
 A Main Stock (A) with Two Sets of Transverse Sliding Arms, a Depth Gauge (F) Adjusted by a Screw, and a Slitting Cutter with Stop.
 A Sliding Section (B), with a Vertically Adjustable Bottom.
 The Auxiliary Center Bottom (C) is to be Placed in Front of the Cutter, as an Extra Support, or Stop, when needed.
 This Bottom is Adjusted both Vertically and Laterally.
 Fences (D) and (E). Fence D has a Lateral Adjustment by means of a Screw, for Extra Fine work. The Fences can be Used on Either Side of the Plane, and the Rosewood Guides can be Tilted to Any Desired Angle, Up to 45 degrees, by Loosening the Screws on the Face. Fence (E) can be Reversed for Center Beading Wide Boards.
 An Adjustable Stop to be used in Beading the Edges of Matched Boards is Inserted on Left Hand Side of Sliding Section (B).

Directions:

Moulding Plane.—Insert the Desired Cutter, and Adjust Bottom of Sliding Section (B) to Conform to the Shape of the Cutter, then Fasten this Section Firmly by means of the Check-Nuts on the Transverse Arms. When needed, Adjust Auxiliary Center Bottom (C) for an Additional Support in Front of the Cutter. By Tilting the Rosewood Guides on Fences D and E, Mouldings of Various Angles may be formed.
Match, Sash, Beading, Fluting, Hollow, Round Plow, Rabbet and Filletster Plane.—Use in same manner as for Mouldings. In working Match and Sash Cutters, the Auxiliary Center Bottom (C) may be Used as a Stop.
Dado.—Remove the Fences (D and E) and Set the Spurs Parallel with the Edges of Cutter. Insert Long Adjustable Stop on Left Hand Side of Sliding Section.
Slitting Plane.—Insert the Cutter and Stop on Right Hand Side of the Main Stock and use Fence D or E for Guide.
Chamfer.—Insert the Desired Cutter, Fasten a Fence on Each Side of the Plane and Tilt the Rosewood Guides to the Desired Angle.

ROUTERS.

PATTERN MAKERS'.



Gray Iron, Japanned Finish.

Per Dozen

No. 1—¾ inch Tempered Tool Steel Cutter; Length over all 7½ inches; 2½ inches Wide; Weight per dozen about 11½ lbs.\$12.00

One-twelfth Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER;
REGISTERED.

PLANE IRONS.



Made
Extra
Heavy
for use
on Very
Hard
Wood
or Knots.



KEEN KUTTER*

FORGED FROM HIGHEST GRADE CRUCIBLE STEEL, EXTRA HEAVY, which Prevents "Chattering;" Oil Tempered, Full Polished, SHARPENED AND WHETTED ON AN OIL STONE BY HAND, READY FOR USE.

SINGLE OR CUT; for KEEN KUTTER* Wood Bottom and Iron Planes.

No. KC—KEEN KUTTER*.

Size, inches	1 1/4	2	2 1/4	2 3/4	3 1/4	3 3/4
Weight per dozen about, lbs.	4	5	5 1/2	5 3/4	6 1/4	8
Per dozen	\$4.40	4.70	5.10	5.40	5.80	6.70

One-half Dozen in a Wood Box.

DOUBLE; for KEEN KUTTER* Iron Planes.

No. KID—KEEN KUTTER*.

Size, inches	1 1/4	2	2 1/4	2 3/4	3 1/4	3 3/4
Weight per dozen about, lbs.	7 1/4	9	10	11 1/4	12 1/4	12 3/4
Per dozen	\$7.20	7.50	8.20	8.70	10.20	10.20

One-quarter Dozen in a Wood Box.

DOUBLE; for KEEN KUTTER* Wood Bottom Planes.

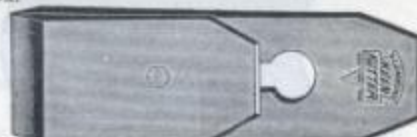
No. KWD—KEEN KUTTER*.

Size, inches	1 1/4	2	2 1/4	2 3/4	3 1/4	3 3/4
Weight per dozen about, lbs.	7 1/4	8 3/4	9 3/4	11 1/4	12	12
Per dozen	\$7.20	7.50	7.80	8.70	10.20	10.20

One-quarter Dozen in a Wood Box.



Highest
Grade
Tool Steel,
Carefully
Made.



KEEN KUTTER*

SOFT STEEL FORGED BODY, With Highest Grade Crucible Steel Bit, Oil Tempered, Full Polished, SHARPENED AND WHETTED ON OIL STONE BY HAND, READY FOR USE.

Will Fit Wood Bench Planes Only.

No. 10—KEEN KUTTER*; SINGLE OR CUT.

Size, inches	2	2 1/4	2 3/4	3 1/4	3 3/4	4
Wgt. per dozen about, lbs.	6 1/4	7	7 1/4	7 3/4	8 1/4	8 3/4
Per dozen	\$4.50	4.75	5.10	5.60	6.20	6.70

One-half Dozen in a Wood Box.

No. 12—KEEN KUTTER*; DOUBLE.

Size, inches	2	2 1/4	2 3/4	3 1/4	3 3/4	4
Wgt. per dozen about, lbs.	9	10	11	12	13	14
Per dozen	\$8.80	9.10	9.60	10.20	11.25	12.35



CABINET SCRAPERS.



KEEN KUTTER*, FLAT STEEL.

No. KKC—KEEN KUTTER*; Highest Grade Crucible Steel, Oil Tempered and Full Polished.

Size, inches	2x4	2 1/2x5	3x5	3 1/2x6	4x6
Weight per dozen about, lbs.	1 1/2	2	2 1/2	3 1/2	4
Per dozen	\$1.20	1.20	1.20	2.00	2.00

One Dozen in a Cardboard Box.

No. KK79—KEEN KUTTER*; Black Enamelled Cast Iron Frame; Highest Grade Crucible Steel Cutters; Oil Tempered, Full Polished; SHARPENED AND WHETTED BY HAND ON AN OIL STONE, READY FOR USE; Length 11 inches; Size of Cutter 2 1/4 inches; Weight each about 1 1/2 lbs. \$1.00

One in a Cardboard Box.

CABINET SCRAPERS.



STANLEY'S.

Each

No. 83—STANLEY'S; Adjustable; Japanned Cast Iron Frame and Clamp; Hardwood Handles; Polished and Tempered Tool Steel Cutters; Length 9½ inches; Size of Cutters 4 inches; Weight each about 1½ lbs. \$1.00

EXTRA CUTTERS FOR No. 83 SCRAPERS; Size 4 inches; Weight each about ¼ lb.20

Can be Adjusted to Any Desired Pitch; and may be worked toward or from the person using it. Roller acts as a Support to relieve the strain on the wrist and hands of the Workman. Handle can be Detached for Working into Corners.

One in a Cardboard Box.

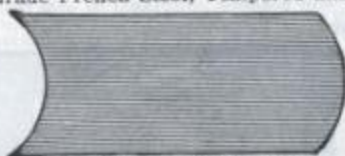


Per Dozen

No. A1—Mahogany Finish Hardwood Frame, Length 12 inches; Tempered and Polished Tool Steel Blade 2¼x2¾ inches; Nickel Plated Cast Steel Face Plate; Weight per dozen about 12 lbs. \$12.00

One-twelfth Dozen in a Cardboard Box.

Highest Grade French Steel, Tempered and Polished.



Concave and Convex.

No. 20.

Size, inches	2½x5	2½x6	3x5	3x6
Weight per dozen about, lbs.	1½	1½	1½	1½
Per dozen	\$1.80	2.20	2.20	2.65



Swan Neck.

Per Dozen

No. 25—5¼x3½ inches; Weight per dozen about 1½ lbs. \$2.80

Packed Loose.



Per Dozen

No. 2—Plain Beechwood Handle 12 inches Long; Tempered and Polished Tool Steel Blade 3x3 inches; Malleable Iron Clamp and Screw; Weight per dozen about 9 lbs. \$4.50

VENEER SCRAPERS.



Each

No. 12—Japanned Cast Iron Frame and Clamp; Steel Adjusting Screws; Polished Rosewood Handles; Tempered and Polished Tool Steel Cutters, Adjustable to any Angle; Length 5½ inches; Size of Cutter 3 inches; Weight each about 1 lb. \$2.25

One in a Cardboard Box.

SCRAPERS OR BURNISHERS.



Per Dozen

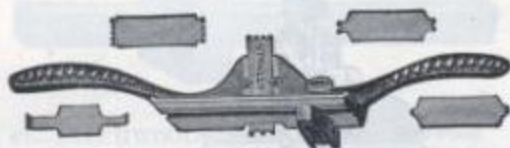
No. 3—Tempered and Polished Tool Steel Oval Blade ¾ inch Wide, 4 inches Long; Polished Applewood Handle with Nickel Plated Brass Ferrule; Length over all 8 inches; Weight per dozen about 1½ lbs. \$3.35

One-half Dozen in a Cardboard Box.



Per Dozen

No. 5—Tempered and Polished Tool Steel Square Blade, 7/32 inch Thick, 4½ inches Long, with Round Point Tapered 1 inch from Tip; Polished Applewood Handle, with Nickel Plated Brass Ferrule; Length over all 9 inches; Weight per dozen about 2 lbs. \$5.00

HAND BEADERS.

Per Dozen

No. 66—STANLEY'S; Nickel Plated Cast Iron
Frame and Handles; Seven Tempered and
Polished Tool Steel Cutters, fitted with Gauge
for Straight or Oval Work; Cutters are Sharp-
ened at Both Ends; Width of Cutters $\frac{1}{4}$ to 1
inch Assorted; Length over all 10 inches;
Weight per dozen about 16 lbs. \$12.00

For Beading, Reeding or Fluting Straight or Irregular Sur-
faces and for all kinds of Light Routing, with Square Gauge
for Straight and an Oval Gauge for Curved Work. Seven
Steel Cutters go with each Tool.

One-twelfth Dozen in a Cardboard Box.

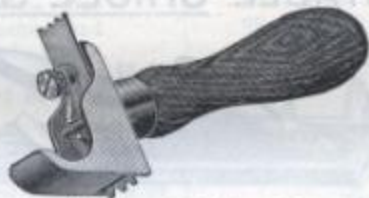
ANGLE DIVIDERS.

A
Handy
Tool
for
Laying
out
Work.

Per Dozen

No. 30—STANLEY'S; Nickel Plated Cast Iron
Frame; Steel Arms and Adjusting Screws;
Length over all $7\frac{1}{4}$ inches; Weight per dozen
about 10 lbs. \$18.00

Graduated for Different Angles. Adapted especially for
Finding and Bisecting Angles, Fitting Mouldings or Other
Woodwork to any Angle; can be used as a Try or "T" Square.

SINGLE HANDED BEADERS.

For Beading, Reeding or Fluting Diagonal Lines, etc.

Per Dozen

No. 69—Cast Iron Frame and Steel Set Screw, Nickel Plated; with Six Assorted Steel Cutters and One
Blank; Hardwood Handle; Width of Blades $1\frac{1}{16}$ inch; Length of Handle $3\frac{3}{4}$ inches; Length over all
 $5\frac{1}{4}$ inches; Weight per dozen about 5 lbs. \$9.00

One-twelfth Dozen in a Cardboard Box.

JOINTER GAUGES.

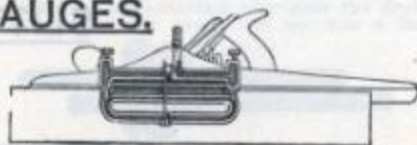
Showing Mode of Adjustments.

Per Dozen

No. 12—PERFECTION; Adjustable; Japanned
Cast Iron Frame; Polished Plate; Length
over all 9 inches; Weight per dozen about
24 lbs. \$18.00

Can be attached to any Iron or Wooden Jack or Jointer
Plane. Adjustable for Squaring, or to any desired Bevel.

One-twelfth Dozen in a Cardboard Box.



Per Dozen

No. 333—SHEPARDSON'S; Adjustable; Nickel
Plated Cast Iron Frame; Steel Adjusting
Screws; Length over all 8 inches; Weight per
dozen about 15 lbs. \$24.00

Can be attached to any Iron Jack or Jointer Plane. Ad-
justable for Squaring, or to Any Desired Bevel.

CHAMFER GAUGES.

Per Dozen

No. 30—FOR DRAWING KNIFE, Adjustable;
Nickel Plated Cast Iron Frame; Steel
Graduated Arm and Adjusting Screws; Fits 1
to $1\frac{1}{2}$ inch Blades; Weight per dozen about
6 lbs. \$8.00

One-twelfth Dozen in a Cardboard Box.

RULE GAUGES.

HANDY.

Per Dozen

No. 200—Polished Brass, with Thumb Lever to
Clamp Firmly on Rule; Sliding Bar on
One Side and Point on Reverse Side; 1 inch
Wide, $\frac{3}{4}$ inch Long; Weight per dozen about
7 ounces \$1.80
One Dozen on a Display Card; One Card in a Cardboard
Box.



BIT GAUGES.



- No. 49—STANLEY'S ADJUSTABLE; Nickel Plated; Cast Iron Frame; Steel Set Screws; Length $2\frac{1}{2}$ inches; Adjustable to fit any size Bit up to 1 inch in Diameter; Weight per dozen about $4\frac{1}{2}$ lbs. Per Dozen \$7.20

When using this Tool the workman is able to bore any number of holes to a given depth. A stop being placed on both sides of the bit, when the proper depth is reached, the Bit remains upright and does not bend or break the worm. By loosening the Thumb Screws, the Shank of the Bit can be inserted in the Gauge, and the twist of the Bit turned to the required depth.

One-twelfth Dozen in a Cardboard Box.

ADJUSTABLE CHISEL GAUGES.

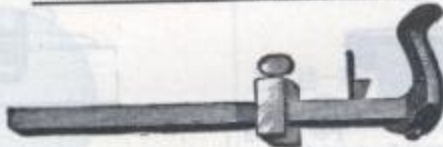


When attached to a $\frac{1}{4}$ inch Chisel (with Beveled edge up) a Shaving of Any Desired Thickness can be raised, for Blind Nailing or Inlaying Wood Strips in Ornamental Surface Work.

- No. 96—With Steel Stock, Set Screw and Cast Cap; Length $2\frac{1}{4}$ inches; Width $\frac{3}{8}$ inch; Weight per dozen about $\frac{3}{4}$ lb. Per Dozen \$2.40

One-half Dozen in a Cardboard Box.

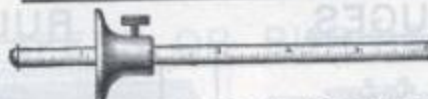
SLITTING GAUGES.



- No. 84—Beechwood, Plain Finished; With Roller; 17 inch Bar, Marked in inches and $\frac{1}{16}$ ths; Length of Head $\frac{5}{8}$ inches; Weight per dozen about 14 lbs. Per Dozen \$10.00

One-half Dozen in a Cardboard Box.

SCRATCH GAUGES.



Made of Polished Steel, with Hardened Cast Steel Head. The Beam is Graduated in 64ths of an inch. The Marker is a Thin Square Piece of Steel, Nicely Tempered, which is firmly held against the end of Beam, presenting Four Marking Points.

No. 29.		
Length of Beam, inches	5	6
Diameter of Beam, inches	$\frac{15}{64}$	$\frac{5}{16}$
Weight each about, ozs.	4	7
Each	\$1.00	1.25

One in a Cardboard Box.

MARKING GAUGES.



Marking.

Per Dozen

- No. 61—BEECHWOOD; Plain Finish; Boxwood Thumb Screw; Bar $8\frac{1}{2}$ inches Long; Graduated in inches and 16ths; Tempered Steel Point; Weight per dozen about 3 lbs. \$1.00
One Dozen in a Cardboard Box.



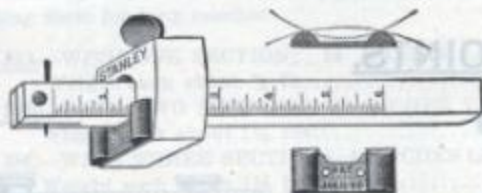
No. 65.

Marking.

Per Dozen

- No. 65—BOXWOOD; Polished; Brass Plate in Head; Brass Thumb Screw and Shoe; Bar $8\frac{1}{2}$ inches long; Graduated in inches and 16ths; Adjustable Tempered Steel Point; Weight per dozen about 4 lbs. \$6.00
One-half Dozen in a Cardboard Box.

- No. 62—BEECHWOOD, Polished; Boxwood Thumb Screw; Bar $8\frac{1}{2}$ inches Long; Graduated in inches and 16ths; Adjustable Tempered Steel Point; Weight per dozen about 3 lbs. 2.00
One Dozen in a Cardboard Box.



STANLEY'S Improved.

Per Dozen

- No. 161—BEECHWOOD; Plain Finish; Boxwood Thumb Screw; Bar $8\frac{1}{2}$ inches Long; Graduated in inches and 16ths; Tempered Steel Point; Brass Face with Ribs on Head; For use on Concave or Convex Edges. \$2.00
No. 162—BEECHWOOD; Same as No. 161 but with Polished Finish and Adjustable Point. 3.00
Weight per dozen about $3\frac{1}{4}$ lbs.
One-half Dozen in a Cardboard Box.



Mortise and Marking.

Per Dozen

- No. 77—ROSEWOOD; Polished; Brass Plate on Head; Brass Thumb Screw and Shoe; Bar $8\frac{1}{2}$ inches Long; Graduated in inches and 16ths; Three Tempered Steel Points; One of which is Adjusted by Thumb Screw at end of Bar; Weight per dozen about 5 lbs. \$10.00
One-half Dozen in a Cardboard Box.



Mortise and Marking.

Per Dozen

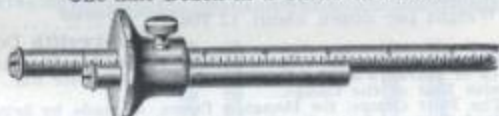
- No. 72—BEECHWOOD; Polished; Boxwood Thumb Screw; Double Bar $8\frac{1}{2}$ inches Long; Graduated in inches and 16ths on both sides; Two Tempered Steel Points; Weight per dozen about 4 lbs. \$4.00



STANLEY'S Improved Mortise and Marking.

Per Dozen

- No. 177—ROSEWOOD; Polished; Brass Plate in Head; Brass Thumb Screw and Shoe; Bar $8\frac{1}{2}$ inches Long, Graduated in inches and 16ths; Three Tempered Steel Points, One of which is Adjusted by Thumb Screw at end of Bar; Brass Face with Ribs on Head; For use on Concave or Convex Edges; Weight per dozen about 5 lbs. \$11.00
One-half Dozen in a Cardboard Box.



Mortise and Marking.

Per Dozen

- No. 100—BARRETT'S Improved Combination Roller; Nickel Plated; CAST IRON HEAD; One $8\frac{1}{2}$ -inch Steel Bar; Graduated in inches and 32nds; One $4\frac{1}{2}$ -inch Plain Steel Bar; Tempered Steel Marking Wheels; Steel Thumb Screw; Weight per dozen about 9 lbs. \$10.00

The Steel Points are attached very near the Ends of the Bars, to admit of being used close up into a Rabbet or Corner.



Mortise and Marking.

Per Dozen

- No. 91—STANLEY'S; Nickel Plated CAST IRON HEAD; Steel Bars and Set Screws; Tempered Steel Points; Bars Graduated in inches and 16ths; Length $6\frac{1}{2}$ inches; Weight per dozen about 6 lbs. \$7.80



Butt Gauge.

Per Dozen

- No. 95—STANLEY'S Nickel Plated; CAST IRON Frame; Steel Bars and Set Screws; Tempered Steel Points; Length $2\frac{1}{4}$ inches; Weight per dozen about 6 lbs. \$9.00
Two Bars. One with Two Steel Cutters fixed upon it. When the Cutter at the Outer End of this Bar is Set for Gauging on the Edge of the Door, the Cutter at the Inner End of the Bar is Already Set for Gauging from the Back of the Jamb. The Other Bar has a Steel Cutter to Accurately Gauge for the Thickness of the Butt.
One-twelfth Dozen in Cardboard Box.

2 PANEL GAUGES.

No. 85 1/2—ROSEWOOD; Polished; Brass Thumb Screw and Shoe; Brass Face on Head and Front End of Bar; Tempered Steel Adjustable Point; Length of Bar 20 3/4 inches; Length of Head 7 inches; Weight per dozen about 11 lbs.\$18.00

One-half Dozen in a Cardboard Box.



No. 156—BEECHWOOD; Plain Finish; Boxwood Thumb Screw; Tempered Steel Adjustable Point; Length of Bar 18 inches; Length of Head 6 inches; Weight per dozen about 6 lbs. \$3.20

One Dozen in a Cardboard Box.

BUTT AND RABBET GAUGES.

Cut showing Gauge as used for Doors.



Cut showing Gauge as used for Mortising, etc.

No. 92—STANLEY'S; ROSEWOOD Head; Brass Plates Inserted in Face of Head; Brass Thumb Screw and Screw; Brass Double Bar, Graduated in inches and 16ths. One Bar slides within the Other and is Adjustable by Thumb Screw at end; Tempered Steel Marking Blades; Polished Steel Guide Plate; Weight per dozen about 12 lbs.\$15.00

One-twelfth Dozen in a Cardboard Box.

This Gauge has Two Bars, both of Brass, One Movable within the Other; also Three Blades or Markers. The Two Steel Blades or Markers at the Extreme End of the Inner Bar, can be moved to any position by means of the Thumb Screw at opposite End of the Gauge.

The Butt Gauge, for Hanging Doors, is made by bringing the Markers on the End of the Inner Bar, back of and to any required distance from the Outer Surface of the Steel Plate.

By placing One Edge of a Butt between the Surface of the Head and the Small Blade which stands up back of it, the Exact Thickness of the Butt is ascertained, and can be Accurately Gauged on both the door post and the door. The Movable Steel Plate affords a Perfect Guide for Gauging in, or near Rabbets of all kinds.



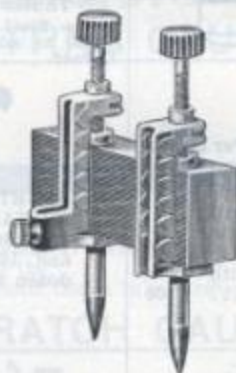
Polished Bronze Metal Frames and Set Screws; Tempered and Polished Steel Points. Per Pair

No. 1—SMALL; Length of Points 1 1/2 inches; Length over all 3 1/2 inches; Weight per pair about 1/4 lb.\$1.20

No. 2—MEDIUM; Length of Points 2 inches; Length over all 4 1/4 inches; Weight per pair about 1/2 lb.1.50

No. 3—LARGE; Length of Points 2 inches; Length over all 4 3/4 inches; Weight per pair about 1 lb.2.10

Two Pairs in a Cardboard Box.

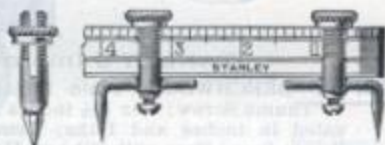
TRAMMEL POINTS.

Per Pair

No. 4/S—STANLEY'S; Nickel-Plated Cast Iron Frames; Steel Set Screws; Tempered Steel Points; Length of Points 1 1/4 inches; Length over all 4 1/2 inches; Weight per pair about 1/2 lb.\$0.75

Can be attached to One Side of any Straight Stick, without regard to its Exact Size. The Form of the Socket makes it possible to use an Ordinary Lead Pencil or a Carpenter's Pencil.

One Pair in a Cardboard Box.



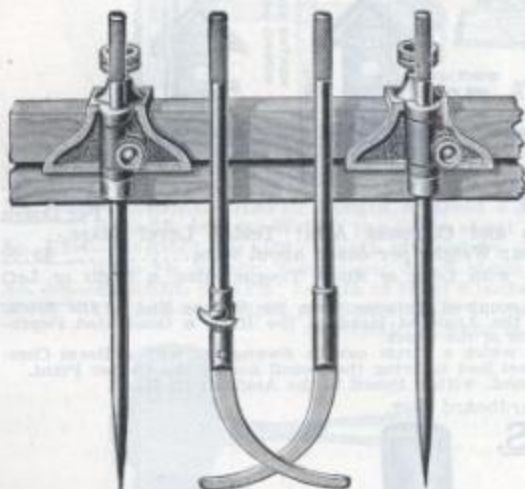
Per Set

No. 99—SETS; Two Polished Brass Trammel Heads and Set Screws, with Adjustable Tempered and Blued Finished Steel Points; One Brass Pencil Socket Head; Length of Heads 1 1/2 inches; Diameter 3/8 inch; Length of Points 3/4 inch; Weight per set about 2 ounces\$1.00

Can be attached to Folding Rules of Ordinary Width; and on Many Kinds of Work will take the Place of Regular Trammel Points, Callipers or Dividers.

One Set in a Cardboard Box.

EXTENSION TRAMMEL POINTS.



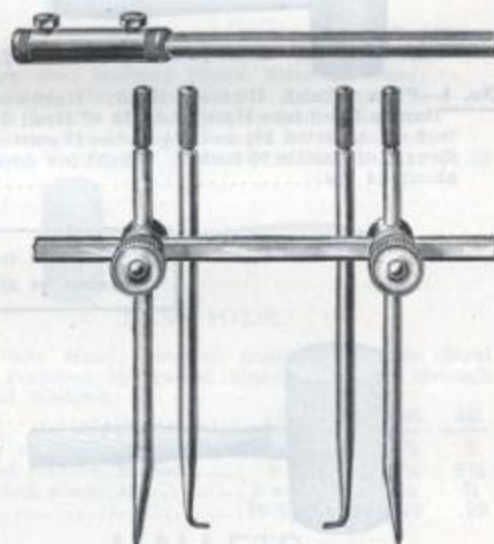
Bronze Frame with Steel Legs and Points, Tempered. The Points are Eccentric and may be Loosened and Rotated in their sockets to make Fine Adjustments. Either Point may be removed and a Common Pencil Inserted. Complete with Caliper Legs.

Each
No. 51A—Weight each about 1½ lbs..... \$3.25
One in a Cardboard Box.

Made of Polished Steel. The Beam is 5/16 inch Round with One Side Flattened. It is made in One, Two or Three Sections of 14 inch Lengths each, and Coupled together by means of an Improved Socket Coupling and Grip Nut rigidly holding them for long reaches.

No. 58A—WITH ONE SECTION; 14 INCHES LONG;	Each
Weight each about ¾ lb.....	\$2.20
No. 58B—WITH TWO SECTIONS; 28 INCHES LONG;	
Weight each about 1¼ lbs.....	2.60
No. 58C—WITH THREE SECTIONS; 42 INCHES LONG;	
Weight each about 1½ lbs.....	3.00

One in a Cardboard Box.



SPACING CENTER PUNCH.



Made of Tool Steel, Tempered and Polished; Solid Punch with Guide Point set in a Socket with a Spiral Spring to press it down. When the Punch is Struck, the Guide presses back into its Socket, permitting the Punch to be held straight over its work, and Insuring Accurate Results. The Screw with Chuck Nut Sets the Spacer right for Small or Large Drill, and has a variation from 5/64 to 3/8 inches.

Per Dozen
No. 118—As described above; Length over all 4½ inches; Weight per dozen about 2¼ lbs..... \$9.00

One-twelfth Dozen in a Cardboard Box.

-184-
ODD JOBS.



STANLEY'S.

No. 1—Nickel Plated Cast Iron Frame; Steel Adjusting Screws and Compass Arm; Tested Level Glass, Complete with a 12 inch Graduated Rule; Length 4 inches; Weight per dozen about 6 lbs. \$9.00

Attach the Tool to a Rule, making a Try-Square or a T-Square, with Long or Short Tongue; also, a Right or Left Hand Miter-Square. The Pointed Steel Rod is a Scratch Awl.

A Marking-Gauge is made by Setting the Point or Pencil at any required distance from the Square End of the Stock. A Mortise-Gauge, also, by Inserting an Additional Point or Pencil in the Angle of the Rule; a Graduated Depth-Gauge is Furnished by Extending the Rule Down from the Square End of the Stock.

The Steel Point at Mitered End of the Tool forms a Center, from which a Circle can be Swung (as with a Beam Compass) 1½ to 13 inches in Diameter. For Small Circles, reverse the Steel Rod to bring the Pencil nearer the Center Point. A Circle of 25 inches Diameter can be Swung, if the Rule alone is used, with a Pencil in the Angle at its Head.

One-twelfth Dozen in a Cardboard Box.

MALLETS.



TINNERS' ROUND.

Per Dozen

No. 4—Plain Finish Hickory Head; Hardwood Handle fitted into Head; Length of Head 5½ inches; Assorted 2¼ and 2½ inches Diameter; Length of Handle 10 inches; Weight per dozen about 14 lbs. \$1.00



Per Dozen

No. 4/S—Plain Finish Selected Second Growth Hickory Head; Hardwood Handle, fitted into Head; Length of Head 6 inches; Assorted 2¼ and 2½ inches Diameter; Length of Handle 10 inches; Weight per dozen about 16 lbs. \$3.00

Your Mail Orders will receive our most careful attention at all times.



Heavy Varnished HICKORY HEAD; Plain Hardwood Handle, Mortised in Head.
ROUND.

Nos.	1	2	3
Length of Head, inches.....	5	5½	6
Diameter of Head, inches.....	3	3½	4
Length of Handle, inches.....	8½	8½	8½
Weight per dozen about, lbs.....	12	18	27
Per dozen.....	\$1.50	2.00	2.50

Same as above WITH LIGNUM-VITAE HEAD.

Nos.	5	6	7
Length of Head, inches.....	5	5½	6
Diameter of Head, inches.....	3	3½	4
Length of Handle, inches.....	9	8½	8½
Weight per dozen about, lbs.....	22	34	42
Per dozen.....	\$3.00	4.00	5.50

SQUARE.

Nos.	8	9	10
Length of Head, inches.....	6	6½	7
Width of Middle, inches.....	3¾	3¾	3¾
Size of Face, inches.....	2½x3½	2½x3¾	3x4
Length of Handle, inches.....	8	8¾	8½
Weight per dozen about, lbs.....	18	22	24
Per dozen.....	\$2.00	2.50	3.00

Same as above WITH LIGNUM-VITAE HEAD.

Nos.	12	13
Length of Head, inches.....	6½	7
Width of Middle, inches.....	3¾	4
Size of Face, inches.....	2½x3¾	3x4
Length of Handle, inches.....	8¾	8½
Weight per dozen about, lbs.....	36	38
Per dozen.....	\$4.75	5.75

Packed Loose.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.



MALLETS.



KEEN KUTTER®

Made of Second Growth Field Hickory. Selected Stock; Shellaced; Hardwood Handle 10 1/4 inches Long extends through Head and FASTENED WITH OUR GRELLNER PATENT WEDGE.

	Per Dozen
No. K216—ROUND; Length of Head 6 inches; Diameter of Head 2 1/2 inches; Weight per dozen about 14 lbs..	\$3.50
No. K306—BARREL SHAPE; Length of Head 6 inches; Diameter of Head at Center 3 inches; Diameter at Ends 2 3/4 inches; Weight per dozen about 18 lbs.	5.00
No. K316—BARREL SHAPE; Length of Head 6 1/4 inches; Diameter of Head at Center 3 1/4 inches; Diameter at Ends 2 3/4 inches; Weight per dozen about 26 lbs.	6.00
No. 406—BARREL SHAPE; Length of Head 6 inches; Diameter of Head at Center 4 inches; Diameter at Ends 3 1/4 inches; Weight per dozen about 30 lbs.	7.00

One-twelfth Dozen in a Paper Wrapper; Packed Loose.



No. 14—HEAVY VARNISHED HICKORY HEAD and Hardwood Handle, Mortised in Head; Polished Cast Iron Band on Each End of Head; Length of Head 6 inches; Diameter of Face 4 inches; Length of Handle 8 3/4 inches; Weight per dozen about 30 lbs..... \$5.50



No. 15—JAPANNED CAST IRON HEAD, with Varnished Hickory Faces, fitted in Head; Varnished Hardwood Handle, mortised in Head; Length of Head 4 1/4 inches; Diameter of Faces 2 1/2 inches; Length of Handle 9 inches; Weight per dozen about 34 lbs..... \$4.00



RAW HIDE FACED.

Fitted in Japanned Finish Malleable Iron Head; Plain Hardwood Handle extends through Head and Wedged.

Nos.	1H	2H	3H
Diameter of Face, inches.....	1 1/4	1 1/2	1 3/4
Length of Handle, inches.....	9 1/2	10	10
Weight of each about, lbs.....	1	1 1/2	2 1/4
Each.....	\$1.50	1.90	2.30



RAW HIDE.

Raw Hide Head; Riveted together by two Steel Rivets; Polished Hardwood Handle extends through Head and Wedged.

Nos.	1R	2R	3R	4R
Diameter of Face, inches.....	1 1/4	1 1/2	1 3/4	2
Length of Handle, inches.....	8	8	8 3/4	8 3/4
Weight each about, lbs.....	3 oz	3/4	3/4	3/4
Each.....	\$0.50	.60	.70	.90

MAULS.



RAWHIDE.

Made with Two Malleable Flanges with Rawhide Center; Wood Handle.

Nos.	1	2	3	4	5	6
Diameter at Center, in.	3	3 1/2	4 1/4	4 3/4	4 3/4	5
Width of Face, inches.	1 1/4	2 1/4	2 3/4	2 3/4	2 3/4	3
Length over all, in.	9	10 1/2	11	11 1/4	12 3/4	13 1/4
Weight each about, lbs.	3	4	6	8	10	12
Each.....	\$3.60	4.20	4.80	5.50	6.00	6.50

Packed Loose.

MALLETS.



STONE MASONS'.

No. 20—Plain Finish; Extra Selected and Seasoned Hickory Head; Hardwood Handle 6 inches Long, fitted in Head.

Pounds	5	5 1/2	6	6 1/2	7
Diameter of Head, inches	5 1/2	5 1/2	5 1/2	5 3/4	6
Width of Head, inches...	6 1/2	6 1/2	7	7	7
Per dozen.....	\$16.00	17.00	18.00	22.00	23.00

PLUMB BOBS.



No. 100.

Iron, Black Japanned; Adjusted Top.

S. H. CO.*

Nos.	100	200	300	400
Weight each, lbs.	1	2	3	4
Per dozen	\$3.00	5.50	8.00	12.00

One-half Dozen in a Wood Box.

Iron, Black Japanned; Adjusted Top.

No. 23—Weight each 9½ ozs.	Per Dozen
One Dozen in a Cardboard Box.	\$1.20



Polished Cast Brass, Hardened Steel Point; Adjusted Screw Top.

No. 56—Weight each 6 ounces..... Per Dozen \$5.45

No. 67—Weight each 11½ ounces..... 7.50

One-half Dozen in a Cardboard Box.



PERFECTION.

POLISHED AND LACQUERED BRASS CASE, filled with Lead; Hardened Steel Point, which is a part of Steel Rod passing through body to which Adjusted Screw Top is attached. The Rim or Bead around the Bob is to protect it from bruising or disfigurement from contact with other bodies or rough surfaces.

Nos.	110	120	130	140	150
Weight each, ozs.	8	14	24	36	56
Per dozen	\$9.00	12.00	15.00	18.00	24.00

One-twelfth Dozen in a Solid Wood Box with Screw Cover, fitted to its size, with Cord attached.



No. 24.

Lead; Natural Color Polished Steel Point.

No. 34—Weight each 12 ozs.	Per Dozen
	\$3.75

Iron, Black Japanned; Adjusted Top.

No. 001—Weight each 1 lb. 2 ozs.	Per Dozen
One-half Dozen in a Cardboard Box.	\$2.25



Showing Bob Apart.

Polished Cast Bronze Metal; Reversible Hardened Steel Center Pin, with Adjusted Bronze Screw Top.

No. 20R.

Weight, each	12 ozs.	1 lb.	2 lbs.	3 lbs.	4 lbs.	5 lbs.
Per dozen	\$28.75	34.50	56.50	72.00	86.50	102.00

One-twelfth Dozen in a Wood Box.



Cast Iron, Nickel Plated and Polished; Adjusted Top.

No. 11—Weight each 5½ ounces.	Per Dozen
No. 12—Weight each 12 ounces.	\$18.00
One Dozen in a Cardboard Box.	24.00

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

BRICK TROWELS.



The Bend of the Shank and Shape of the Handle are Carefully Modeled after Latest Approved Patterns for Expert use. Hung just Right. Handsome Tools.

KEEN KUTTER* Expert, Philadelphia Pattern, Wide Angle Heel.

KEEN KUTTER* Philadelphia Pattern, Regular Heel.

Highest Grade Crucible Steel Blade, Polished and Etched; Extra Ground and Oil Tempered; Blue Lacquered Steel Shank; Long Polished Steel Ferrule.

KEEN KUTTER* EXPERT.

Special Taper Ground, Heavy Heel, Flexible Point; Oil Finish White Gumwood Handle 5 1/4 inches Long.

No. KELB—KEEN KUTTER* EXPERT.

LONDON PATTERN, Round Heel.

Length of Blade, in...	10	10 1/2	11	11 1/2	12
Width at Heel, in...	4 5/16	4 9/16	4 3/4	4 7/8	5
Length over all, in...	16 1/4	17	17 1/4	17 1/2	18
Wgt. doz. about, lbs.	11	12	13	13 1/2	14
Per dozen	\$12.50	13.00	13.50	14.00	14.50

No. KEPB—KEEN KUTTER* EXPERT.

PHILADELPHIA PATTERN, Wide Angle, Square Heel.

Length of Blade, in...	10	10 1/2	11	11 1/2	12
Width at Heel, in...	4 3/4	5 1/8	5 3/8	5 1/2	5 5/8
Length over all, in...	16 1/4	16 3/4	17 1/4	18	18 1/4
Wgt. doz. about, lbs.	12	13	14	15	15 1/2
Per dozen	\$12.50	13.00	13.50	14.00	14.50

KEEN KUTTER*

Regular Shape and Grinding; With White Gumwood Handle.

No. KLB—KEEN KUTTER*.

LONDON PATTERN, Round Heel.

Handle 4 3/4 inches Long.

Length of Blade, in...	10	10 1/2	11	11 1/2	12
Width at Heel, in...	4 5/16	4 9/16	4 11/16	4 7/8	5
Length over all, in...	15 1/2	16	16 1/4	17	17 1/2
Wgt. doz. about, lbs.	10	12	12 1/2	13	14
Per dozen	\$10.00	10.50	11.00	11.50	12.00

No. KPB—KEEN KUTTER*.

PHILADELPHIA PATTERN, Regular Square Heel.

Handle 5 1/2 inches Long.

Length of Blade, in...	10	10 1/2	11	11 1/2	12
Width at Heel, in...	4 3/4	5 1/8	5 3/8	5 1/2	5 5/8
Length over all, in...	16	16 1/2	17 1/4	17 1/2	18
Wgt. doz. about, lbs.	12	13	14	15	16
Per dozen	\$10.00	10.50	11.00	11.50	12.00

One-half Dozen in a Cardboard Box.

POINTING TROWELS.

SQUARE HEEL.



High Grade.
Nicely Finished.

KEEN KUTTER*

HIGHEST GRADE CRUCIBLE STEEL Polished and Etched Blade; Black Lacquered Steel Shank; Heavy Polished Steel Ferrule; Select Cherry Handle 4 1/2 inches Long.

No. KP—KEEN KUTTER*.

Length of Blade, inches.....	4 1/2	5	5 1/2	6
Width of Heel, inches.....	2 1/4	2 1/2	2 3/4	2 11/16
Weight per dozen about, lbs.	2 3/4	3	3 1/4	3 1/2
Per dozen	\$3.50	3.60	3.70	3.90

One-half Dozen in a Cardboard Box.

CORNER TROWELS.



Double Handle Braces Protecting the Ends of the Handle.

KEEN KUTTER*

HIGHEST GRADE CRUCIBLE STEEL Polished Blade, Riveted to Malleable Handle Braces; Black Ruberoid Finish Hardwood Handle 4 inches Long.

No. 10—KEEN KUTTER*; Length of Blade 6 inches; Width 3 3/4 inches; Height over all 3 3/4 inches; Weight per dozen about 5 lbs.....\$10.00

Per Dozen

CORK FLOATS.

PLASTERERS'.

No. PF—Solid Cork, Smoothed on Both Sides; Length 12 inches; Width 6 inches; Thickness 1 1/4 inches; Weight per dozen about 6 lbs.....\$12.00

Packed Loose.



TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

PLASTERING TROWELS.

KEEN KUTTER*



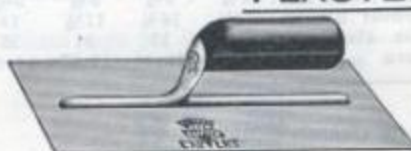
KEEN KUTTER*, CINCINNATI PATTERN.

HIGHEST GRADE FORGED CRUCIBLE STEEL Blade, Polished and Etched, Convex Ground and Oil Tempered; Blade Riveted to Polished Malleable Iron Mounting and Shank; Select Varnished Large Basswood Handle 4 inches Long; Tang Extends Through Handle and is Riveted at Back.

Nos.	S/10	S/10½	S/11	S/11½	S/12
Length of Blade, inches.....	10	10½	11	11½	12
Width of Blade, inches.....	4½	4½	4½	4½	5
Weight per dozen about, lbs.....	11	12	13	14	15
Per dozen	\$12.50	12.50	13.00	13.50	14.00

One-half Dozen in a Cardboard Box.

PLASTERERS' TROWELS.



No. K11½.

KEEN KUTTER* EXPERT.



No. KB11½.

Highest Grade Hand-hammered Crucible Steel Blade, Extra Polished and Etched, Carefully Ground by Hand, Slightly Convex; Oil Tempered; Blade Riveted at 1 inch Intervals to Long Polished Malleable Iron Mounting, with Wide Oval Shank; Select Black Rubberoid Finish Large Hardwood Handle, 4½ inches Long, with Front End Sloping to Shank to Form a Thumb-rest; Solid Tang Extends through Handle and is Fastened at the Back of the Handle with a Flush Set Steel Screw.

FINISHING.

23 Gauge Blade, with Long Mounting, Extending to one inch from Each End of Blade.

Nos.	K10½	K11	K11½	K12
Length of Blade, in..	10½	11	11½	12
Width of Blade, in....	4¾	4¾	4¾	4¾
Wgt. doz. about, lbs.	13	14	15	16
Per dozen	\$24.00	25.20	26.40	27.60

One-third Dozen in a Cardboard Box.

BROWNING.

21 Gauge Blade, with Extra Long Mounting, Extending to ¼ inch from Each End of Blade.

Nos.	KB10½	KB11	KB11½	KB12
Length of Blade, in..	10½	11	11½	12
Width of Blade, in....	4¾	4¾	4¾	4¾
Wgt. doz. about, lbs.	14	15	16	17
Per dozen	\$26.00	27.20	28.40	29.60

PLASTERERS' HAWKS.

KEEN KUTTER*



Highest Grade Heavy Rolled Aluminum; Sand Blast Finish Surface; Polished on Under Side; Black Finish Hardwood Handle, Detachable.

Per Dozen

No. K2—13½x13½ inches; Length of Handle 5 inches; Weight per dozen about 28 lbs.	\$34.00
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One-quarter Dozen in a Cardboard Box.

PLASTERERS' DARBIES.



Plate or Body made of Very Hard Rolled Aluminum, Polished on Both Sides; Natural Finish Hardwood Rib or Long Handle, and Detachable Upright Handle.

No. 2D—3½x44 inches, with One Handle and 18 inch Rib; Weight per dozen about 30 lbs.	\$36.00
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Packed Loose.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

PLUMBS AND LEVELS.

KEEN KUTTER®.

(Patent Applied For)

BEST SELECTED STOCK, HIGHLY FINISHED; IMPROVED "HANDY" GROOVE on both Sides which gives a good grip on the Tool. The bubble has a Cat's Eye effect which makes it EASY TO READ; Simplex Adjustment.



LEVEL ONLY.

Per Dozen

No. KK13—KEEN KUTTER®: ASSORTED LENGTHS, 12 TO 18 INCHES; Cherry, Mahogany Stained, Polished; One Piece Stock; Brass Top Plate; Side Views; Weight per dozen about 33 lbs.\$8.00



PLUMB AND LEVEL.

Per Dozen

No. KK104—KEEN KUTTER®: ASSORTED LENGTHS, 12 TO 18 INCHES; Cherry, Mahogany Stained, Polished; One Piece Stock; Brass Top Plate; Side Views; Weight per dozen about 18 lbs.\$10.00

No. KK2—KEEN KUTTER®: ADJUSTABLE; ASSORTED LENGTHS, 24 TO 30 INCHES; Cherry, Mahogany Stained, Polished; One Piece Stock; Brass Top Plate; Side Views; Weight per dozen about 35 lbs. 18.50



PLUMB AND LEVEL.

Per Dozen

No. KK0—KEEN KUTTER®: ASSORTED LENGTHS, 24 TO 30 INCHES; Cherry, Mahogany Stained, Polished; One Piece Stock; Brass Top Plate; Side Views; Weight per dozen about 33 lbs.\$12.50



PLUMB AND LEVEL.

Per Dozen

No. KK3—KEEN KUTTER®: ADJUSTABLE; ASSORTED LENGTHS, 24 TO 30 INCHES; Cherry, Mahogany Stained, Polished; One Piece Stock; Cast Brass Tips and Brass Top Plates; Side Views; Weight per dozen about 36 lbs.\$20.00



PLUMB AND LEVEL.

Per Dozen

No. KK5—KEEN KUTTER®: ADJUSTABLE; ASSORTED LENGTHS, 24 TO 30 INCHES; Cherry, Mahogany Stained, Polished; Triple Stock; Cast Brass Tips and Brass Top Plates; Plumb with Double Brass Plates; Weight per dozen about 36 lbs.\$33.00

One-half Dozen in a Case.



PLUMB AND LEVEL.

Per Dozen

No. KK30—KEEN KUTTER®: DUPLEX ADJUSTABLE; ASSORTED LENGTHS, 24 TO 30 INCHES; Cherry, Mahogany Stained, Polished; One Piece Stock; Cast Brass Tips and Brass Top Plates; Double Duplex Plate; Weight per dozen about 36 lbs.\$27.50
One-half Dozen in a Case.



PLUMB AND LEVEL.

Per Dozen

No. KK50—KEEN KUTTER®: ADJUSTABLE; ASSORTED LENGTHS, 26 TO 30 INCHES; Double Glasses; Select Solid Cherry Wood Stock, Highly Polished; Full Brass Bound; Heavy Brass Corners and Ends; Square Top Plates; Weight per dozen about 56 lbs.\$75.00



PLUMB AND LEVEL.

Per Dozen

No. KK40—KEEN KUTTER®: ADJUSTABLE; ASSORTED LENGTHS, 26 TO 30 INCHES; Double Glasses; Finest Mahogany, Highly Polished; One Piece Stock, Full Brass Bound; Solid Heavy Corners and Ends; Square Top Plate; Brass Side Views; Weight per dozen about 52 lbs.\$120.00



PLUMB AND LEVEL.

Per Dozen

No. KK45—KEEN KUTTER®: ADJUSTABLE; ASSORTED LENGTHS, 26 TO 30 INCHES; Double Glasses; Finest Mahogany, Highly Polished; One Piece Stock; Double Plumb; Full Brass Bound; Solid Heavy Corners and Ends; Square Top Plate; Brass Side Views; Weight per dozen about 56 lbs.\$140.00

One-twelfth Dozen in a Cardboard Box;
One-half Dozen in a Case.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER;
REGISTERED.

PLUMBS AND LEVELS.

KEEN KUTTER*.

(Patent Applied For)

BEST SELECTED STOCK, HIGHLY FINISHED: IMPROVED "HANDY" GROOVE on both Sides which gives a good grip on the Tool. The bubble has a Cat's Eye effect which makes it EASY TO READ; Simplex Adjustment.



PLUMB AND LEVEL.

No. KK35—KEEN KUTTER*; MASONS'; ADJUSTABLE; LENGTH 42 INCHES. White Pine, Mahogany Stained; One Piece Stock; Brass Top Plate; Side Views; Adapted for Plumb and Line; Weight per dozen about 45 lbs. \$33.00



PLUMB AND LEVEL.

No. KK25—KEEN KUTTER*; MASONS'; ADJUSTABLE; LENGTH 48 INCHES. White Pine, Mahogany Stained; One Piece Stock; Double Glasses; Adapted for Plumb and Line; Weight per dozen about 45 lbs....\$33.00
One-half Dozen in a Case.



PLUMBS AND LEVELS.

JAPANNED CAST IRON FRAME with Nickel Plated Edges; Adjustable Proved Glasses encased in Nickel Plated Steel Casing; One Level Glass and Two Plumb Glasses.

No. 36—STANLEY'S.

Length, inches.....	12	18	24
Weight per dozen about, lbs.....	24	36	48
Per dozen.....	\$21.00	24.00	27.00

One-twelfth Dozen in a Cardboard Box.

NICKEL PLATED CAST IRON FRAME; Ground Glasses encased in Nickel Plated Adjustable Steel Eclipse Cases, which Protect Glass from being broken; One Level Glass and Two Plumb Glasses.

No. 37—STANLEY'S.

Length, inches.....	18	24
Weight per dozen about, lbs.....	36	48
Per dozen.....	\$42.00	48.00

MACHINIST'S LEVEL.

NICKEL PLATED, CAST IRON FRAME; Nickel Plated Steel Top, Screwed to Frame; Two Side Views.

No.	Length	Weight per dozen about	Price per dozen
No. 38½	4 INCHES	about 3½ lbs.	\$4.50
No. 39½	6 INCHES	about 7 lbs.	5.50

One-half Dozen in a Cardboard Box.



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PLUMBS AND LEVELS.



CAST IRON FRAME; Japanned Center and Polished Edges; Brass Center Cylinder, with Inclinometer Graduations and Indicator; Can be used as a Plumb, Level or Inclinometer.

DAVIS'.

Machinists' Iron Plumbs, Levels and Inclinometers.



Per Dozen	
No. 1D—Length 7 inches; Weight per dozen about 18 lbs.	\$24.00
No. 2D—Length 12 inches; Weight per dozen about 24 lbs.	30.00

One-twelfth Dozen in a Cardboard Box.

Per Dozen	
No. 3D—Length 18 inches; Weight per dozen about 42 lbs.	\$36.00
No. 4D—Length 24 inches; Weight per dozen about 60 lbs.	42.00



CAST IRON FRAME; Japanned Center and Polished Edges; Glasses encased in Nickel Plated Steel Casings; Adjustable; One Level Glass and Two Plumb Glasses.

DAVIS'.

Carpenter's and Machinist's Double.

Per Dozen	
No. 6D—Length 6 inches; Weight per dozen about 12 lbs.	\$24.00
No. 7D—Length 12 inches; Weight per dozen about 24 lbs.	27.00

One-twelfth Dozen in a Cardboard Box.

Per Dozen	
No. 8D—Length 18 inches; Weight per dozen about 36 lbs.	\$30.00
No. 9D—Length 24 inches; Weight per dozen about 48 lbs.	36.00

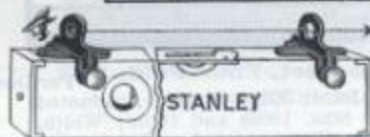
BIT AND SQUARE LEVEL



Per Dozen	
No. 44—Cast Brass Frame and Set Screw; Width 1½ inches; Fits Regular Steel Squares and Auger Bits; Weight per dozen about 2 lbs.	\$3.60

One-twelfth Dozen in a Cardboard Box.

LEVEL SIGHTS.



Cut shows Level Sight and mode of attachment.

Per Dozen Pairs	
No. 1—STANLEY'S; Adjustable; Cast Iron Frame, Polished and Blued Finish; Steel Set Screws; Width of Clamp 1½ inches; Fastened to Lever by Set Screws; Weight per dozen pairs about 3 lbs.	\$9.00

One-twelfth Dozen Pairs in a Cardboard Box.

POCKET LEVELS.



Nickel Plated Hexagon Shape Steel Case; Proved Glasses.

No. 31.

Length, inches	2¼	3¼
Wgt. per doz. about, lbs.	¾	1
Per dozen	\$4.20	6.00



Per Dozen	
No. 200—Polished Rosewood; Nickel Plated Steel Top Plate; LENGTH 6 INCHES; Weight per dozen about 2 lbs.	\$4.50

One-half Dozen in a Cardboard Box.

LEVEL GLASSES.



No. 4	Length, inches									
	1¼	1½	1¾	2	2½	3	3½	4	4½	5
Per gross	\$7.80	7.80	7.80	9.00	10.25	12.75	14.25	11.60		

One-twelfth Gross in a Cardboard Box; Weight per Gross about 2½ lbs.



Japanned Cast Iron; Steel Set Screws.

Per Dozen	
No. 40—Japanned Cast Iron Top Plate; Length 3¼ inches	\$2.75
No. 41—Brass Top Plate; Length 3¼ inches	2.90
Weight per Dozen about 2 lbs.	

One Dozen in a Cardboard Box Assorted

For KEEN KUTTER Levels.

These are the same Glasses as are used in the KEEN KUTTER Plumbs and Levels.

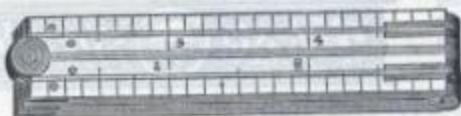
		Assorted				
Nos.		K 1½	K 2	K 2½	K 3	KAS
Length inches		1½	2	2½	3	1½, 2, 2½, 3
Per Gross		\$10.00	10.00	10.00	10.00	10.00

One-twelfth Gross in a Cardboard Box; Weight per Gross about 1½ lbs.

BOXWOOD RULES.



Selected Boxwood; Polished Brass Trimmings; Lines and Figures marked Black; Graduations on Both Sides.



One Foot, Four Fold. Per Dozen

- No. 69—Round Joint; Middle Plates; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{5}{8}$ inch; Weight per dozen about $\frac{1}{2}$ lb. \$1.75
One Dozen in a Cardboard Box.



Two Feet, Four Fold. Per Dozen

- No. 68—Round Joint; Middle Plates; Graduated in inches, 8ths and 16ths; Width, folded, 1 inch; Weight per dozen about $1\frac{1}{2}$ lbs. \$2.50
One Dozen in a Cardboard Box.



Two Feet, Four Fold. Per Dozen

- No. 63 $\frac{1}{2}$ —Square Joint; Edge Plates; Graduated in inches, 8ths, 10ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 1 $\frac{1}{2}$ lbs. \$4.25
No. 62 $\frac{1}{2}$ —Same as No. 63 $\frac{1}{2}$, except FULL BOUND; Weight per dozen about 2 lbs. 8.00



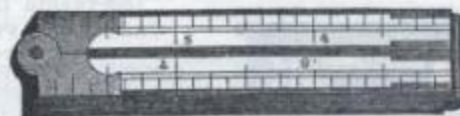
Two Feet, Four Fold. Per Dozen

- No. 61—Square Joint; Middle Plates; Graduated in inches, 8ths and 16ths; Width, folded, 1 inch \$3.00
No. 63—Square Joint; Edge Plates; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch 4.00
No. 84—Square Joint; HALF BOUND; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch 6.50
No. 62—Square Joint; FULL BOUND; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch 8.00
No. 60—Double Arch Joint; FULL BOUND; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch 10.75
Weight per dozen about $2\frac{1}{4}$ lbs.



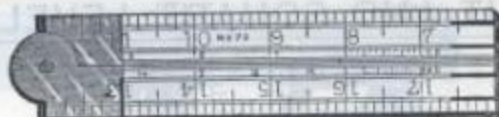
One Foot, Four Fold. Per Dozen

- No. 65—Square Joint; Middle Plates; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{5}{8}$ inch; Weight per dozen about $\frac{1}{2}$ lb. \$2.00



One Foot, Four Fold. Per Dozen

- No. 55—Arch Joint; Middle Plates; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{5}{8}$ inch; Weight per dozen about $\frac{1}{2}$ lb. \$2.50
No. 57—Arch Joint; FULL BOUND; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{5}{8}$ inch; Weight per dozen about $\frac{1}{2}$ lb. 6.25



Two Feet, Four Fold. Per Dozen

- No. 70—Square Joint; Middle Plates; Graduated in inches, 8ths and 16ths, and Drafting Scale; Width, folded, $1\frac{1}{8}$ inches \$4.00
No. 72 $\frac{1}{2}$ —Square Joint; FULL BOUND; Graduated in inches, 8ths, 10ths and 16ths, and Drafting Scale; Width, folded, $1\frac{1}{8}$ inches; Weight per dozen about $2\frac{1}{4}$ lbs. 9.00



Two Feet, Four Fold. Per Dozen

- No. 51—Arch Joint; Middle Plates; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch \$3.50
No. 53—Arch Joint; Edge Plates; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch 4.50
No. 52—Arch Joint; HALF BOUND; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch 7.25
No. 54—Arch Joint; FULL BOUND; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch 8.75
Weight per dozen about $2\frac{1}{4}$ lbs.



Two Feet, Two Fold.

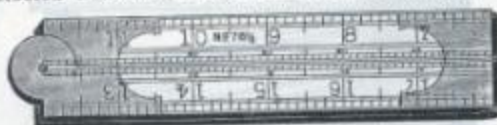
- No. 2—Arch Joint; Bitted; Graduated in inches, 8ths, 10ths and 16ths, and Octagon Scale; Width, folded, $1\frac{1}{2}$ inches; Weight per dozen about 2 lbs. \$5.00
One-half Dozen in a Cardboard Box.

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BOXWOOD RULES.



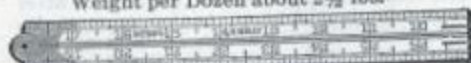
Selected Boxwood; Polished Brass Trimmings; Lines and Figures marked Black; Graduations on Both Sides.



Two Feet, Four Fold. Per Dozen

- No. 77—Double Arch Joint; Bitted; Graduated in inches, 8ths, 10ths and 16ths, and Drafting Scale; Width, folded, 1 1/4 inches.....\$ 6.50
 No. 78—Same as No. 77, except HALF BOUND.....10.00
 No. 78 1/2—Same as No. 77, except FULL BOUND. 12.00

Weight per dozen about 2 1/4 lbs.



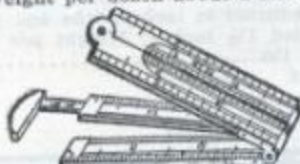
Three Feet, Four Fold. Per Dozen

- No. 66 1/2—Brass Mountings; Arch Joint; Middle Plates; Graduated in inches and 16ths; Width, folded, 1 inch; Weight per dozen about 2 lbs.....\$6.00
 No. 66 3/4—Brass Mountings; FULL BRASS BOUND; Arch Joint; Middle Plates; Graduated in inches and 16ths; Width, folded, 1 inch; Weight per dozen about 2 1/2 lbs.....15.00



Six Inches, Two Fold, Caliper.

- No. 36—Square Joint; Graduated in inches, 6ths, 10ths, 12ths and 16ths; Width, folded, 1/2 inch; Weight per dozen about 1 lb.....\$4.50



One Foot, Four Fold, Caliper. Per Dozen

- No. 32—Arch Joint; Edge Plates; Graduated in inches, 8ths, 10ths, 12ths and 16ths; Width, folded, 1 inch; Weight per dozen about 1 1/4 lbs. \$7.00
 No. 32 1/2—Same as No. 32, except FULL BOUND; Weight per dozen about 2 lbs.....10.00
 No. 32 1/2 R—RIGHT-HAND; Otherwise same as No. 32 1/2; Weight per dozen about 2 lbs.... 10.00



Two Feet, Four Fold, Caliper. Per Dozen

- No. 84 1/2—FULL BRASS BOUND; Square Joint; Graduated in inches, 8ths, 10ths, 12ths and 16ths; Width, folded, 1 inch; Weight per dozen about 2 1/4 lbs.....\$15.00

Nos. 69EM and 68EM, One Dozen; Balance of Page One-half Dozen in a Cardboard Box.



Graduated in Meters on One Side; Inches on other side.

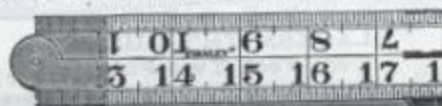
- No. 69EM—ONE FOOT, Four Fold; Round Joint; Middle Plates; Width, folded, 1/2 inch; Weight per dozen about 1 1/2 lbs.....\$1.75

- No. 68EM—TWO FOOT, Four Fold; Round Joint; Middle Plates; Width, folded, 1 inch; Weight per dozen about 1 1/2 lbs.....2.50

- No. 84EM—TWO FOOT, Four Fold; Square Joint; HALF BRASS BOUND; Width, folded, 1 inch; Weight per dozen about 2 lbs.....6.50

- No. 62EM—TWO FOOT, Four Fold; Square Joint; FULL BRASS BOUND; Width, folded, 1 inch; Weight per dozen about 2 lbs.....8.00

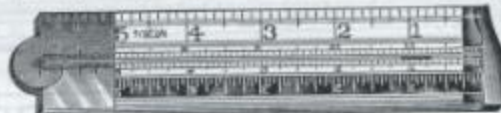
- No. 32EM—ONE FOOT, Four Fold, CALIPER, ARCH JOINT; Edge Plates; Width, folded, 1 inch; Weight per dozen about 2 lbs. 7.00



STANLEY; BLINDMAN'S.

Two Feet, Four Fold; Figures are Extra Large and Distinct.

- No. 7—Square Joint; Middle Plates; Graduated in inches, 8ths and 16ths; Width, folded, 1 1/2 inches; Weight per dozen about 2 lbs.....\$11.00



One Foot, Two Fold, Caliper.

- No. 36 1/2—Square Joint; Graduated in inches, 8ths, 10ths, 12ths and 16ths; Width, folded, 1 1/2 inches; Weight per dozen about 2 lbs.....\$6.50



Two Feet, Four Fold, Caliper.

- No. 83 1/2—Arch Joint; Edge Plates; Graduated in inches, 8ths, 10ths and 16ths, and Drafting Scale; Width, folded, 1 1/2 inches; Weight per dozen about 2 1/4 lbs.....\$12.00

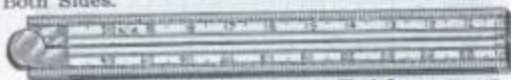


One Foot, Four Fold, Caliper.

- No. 3—Square Joint; Full Bound; Graduated in inches, 8ths and 16ths; Width, folded, 1/2 inch; Weight per dozen about 1 lb.....\$12.00

RULES.

SELECTED BOXWOOD; Polished Brass Trim-
mings; Figures and Lines marked Black; Graduations
on Both Sides.



Two Foot, Two Fold. Per Dozen
No. 18—Square Joint; Graduated in inches, 8ths
and 16ths; Width, Folded, 1½ inches;
Weight per dozen about 2 lbs. \$4.00
One-half Dozen in a Cardboard Box.



Architects', Two Feet, Four Fold. Per Dozen
No. 53½—BOXWOOD; Brass Mountings; Arch
Joint; Edge Plates; Graduated in inches,
8ths, 10ths, 12ths and 16ths. Inside Edges
Beveled; Architects' Drafting Scale; 1 inch
Wide, folded; Weight per dozen about 1½ lbs. \$8.00
One Dozen in a Cardboard Box.



BLACKSMITH'S RULES.
Two Feet, Two Fold. Per Dozen
No. 17—Polished Spring Brass; Figures and Lines
Stamped; Invisible Joint Rivet; Graduated
in inches and 16ths; Width, folded, ¾ inch;
Thickness ¼ inch; Weight per dozen about
2½ lbs. \$6.00
One-half Dozen in a Cardboard Box.



Carriage Makers', Four Feet, Four Fold. Per Dozen
No. 94—BOXWOOD; Arch Joint; Full Brass
Bound; Figures and Lines Marked in
Black; Graduated in inches, 8ths and 16ths;
Width Folded 1½ inches; Weight per dozen
about 5½ lbs. \$24.00
One-half Dozen in a Cardboard Box.

YARD STICKS.



Per Dozen
No. 41—SELECTED AND POLISHED MAPLE;
Brass Tips; Figures and Lines marked
Black; Width 1 inch; Graduated in inches
and 8ths \$3.50
Weight per Dozen about 3 lbs.
One Dozen in a Package.

Per Dozen
No. 50—SELECTED AND POLISHED HICKORY;
Brass Capped Ends; Figures and Lines
marked Black; Width 1 inch; Graduated in
inches and 8ths \$4.50
Weight per Dozen about 3 lbs.
One Dozen in a Package.

EXTENSION RULES.



SELECTED AND SEASONED MAPLE; Brass Tips
and Clamps; Figures and Lines marked Black; Width
1 inch; Graduated in inches and 16ths.

Per Dozen
No. 24—EXTENDS FROM 2 TO 4 FEET; Weight
per dozen about 8 lbs. \$8.00
No. 48—EXTENDS FROM 4 TO 8 FEET; Weight
per dozen about 12 lbs. 10.00
One-half Dozen in a Package.



Combination, One Foot, Two Fold.

Per Dozen
No. 056—BOXWOOD; Square Brass Joint; Full
Brass Bound; Graduated in 10ths, 12ths,
16ths and 24ths, and Drafting Scale; 1½ inch
Wide, folded; ¾ inch Thick; fitted with Steel
Tongue, Graduated to all Angles up to 45 de-
grees, and Level Glass, can be used as Car-
penters' Rule, Level, Square, Plumb, Bevel,
Inclinometer, Drafting Scale and Bevel Pro-
tractor; Full Instructions for use with each
Rule; Weight per dozen about 4½ lbs. \$40.00
One-twelfth Dozen in a Cardboard Box.

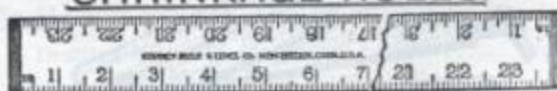


SHIP CARPENTERS' BEVEL.
One Foot. Per Dozen

No. 42—BOXWOOD; Brass Tips; One 7 inch and
One 4 inch Plain Brass Tongue; Graduated
in inches and 16ths; Width, folded, ¾ inch;
Black Figures and Lines; Weight per dozen
about 1½ lbs. \$4.00
One Dozen in a Cardboard Box.

Per Dozen
No. 94—BOXWOOD; Arch Joint; Full Brass
Bound; Figures and Lines Marked in
Black; Graduated in inches, 8ths and 16ths;
Width Folded 1½ inches; Weight per dozen
about 5½ lbs. \$24.00
One-half Dozen in a Cardboard Box.

PATTERN MAKERS' SHRINKAGE RULES.



Per Dozen
No. 30—SELECTED BOXWOOD; 24 INCHES
LONG; Brass Tips; Figures and Lines
marked Black; Width 1½ inches; Graduated
in inches, 8ths and 16ths; Measures 12½
inches to the foot; Weight per dozen about
2 lbs. \$15.00
One-half Dozen in a Package.

-200A-

ZIG ZAG RULES.



S. H. Co.*

Flexible Hardwood, Concealed Steel Rivets; Stiff Springs at Joints, to hold Rule rigid when open; Black Figures and Lines; Steel Joints; Brass Tips; Graduated in Feet, Inches, 8ths and 16ths; Length of Joints 6 inches; Width, folded, $\frac{1}{2}$ inch.

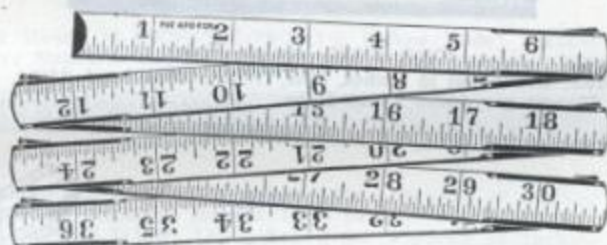
Enameled White.

	Per Dozen
No. 503—3 FEET, Six Fold	\$4.20
No. 504—4 FEET, Eight Fold	5.60
No. 505—5 FEET, Ten Fold	7.00
No. 506—6 FEET, Twelve Fold	8.40

Enameled Yellow.

	Per Dozen
No. 603—3 FEET, Six Fold	\$3.00
No. 604—4 FEET, Eight Fold	4.00
No. 605—5 FEET, Ten Fold	5.00
No. 606—6 FEET, Twelve Fold	6.00

One-half Dozen in a Cardboard Box; Weight per Dozen about $2\frac{1}{2}$ lbs.



Flexible Hardwood, Enameled Yellow; $\frac{1}{2}$ inches Wide; Concealed Rivets; Blued Steel Joints and Tips; Black Figures and Lines; Graduated on both Sides in inches, 8ths and 16ths.

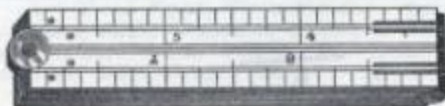
	Per Dozen
No. 3ZR—3 FEET, Six Fold	\$3.00
No. 4ZR—4 FEET, Eight Fold	4.00
No. 5ZR—5 FEET, Ten Fold	5.00
No. 6ZR—6 FEET, Twelve Fold	6.00

One Dozen in a Cardboard Box; Weight per Dozen about $2\frac{1}{2}$ lbs.



IVORY RULES.

SELECTED IVORY; Finely Polished German Silver Trimmings; Lines and Figures Marked Black; Graduations on Both Sides of Rule and Caliper.



One Foot, Four Fold. Per Dozen
No. 90—Round Joint; Middle Plates; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 1 lb. \$10.00
 One Dozen in a Cardboard Box.



One Foot, Four Fold. Per Dozen
No. 92—Square Joint; Edge Plates; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 1 lb. \$17.00
 One-half Dozen in a Cardboard Box.



One Foot, Four Fold. Per Dozen
No. 88—Arch Joint; Full Bound; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 1 lb. \$32.00



Two Feet, Four Fold. Per Dozen
No. 85—Square Joint; Edge Plates; Graduated in inches, 8ths, 10th, 12ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 2 lbs. \$54.00

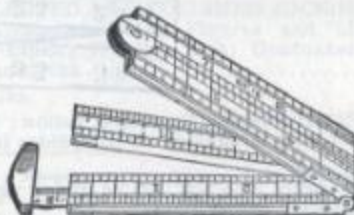


Two Feet, Four Fold. Per Dozen
No. 87—Arch Joint; Full Bound; Graduated in inches, 8ths, 10ths, 12ths and 16ths, and Drafting Scale; Width, folded, 1 inch; Weight per dozen about 3 lbs. \$80.00



Six Inches, Two Fold, Caliper.

Per Dozen
No. 38—Square Joint; Graduated in inches, 8ths, 10ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 1 lb. \$15.00
No. 40 $\frac{1}{2}$ —Square Joint; FULL BOUND; Graduated in inches, 8ths and 16ths; Width folded, $\frac{3}{4}$ inch; Weight per dozen about 1 lb. 24.00



One Foot, Four Fold, Caliper.

Per Dozen
No. 39—Square Joint; Edge Plates; Graduated in inches, 8ths, 10th, 12ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 1 $\frac{1}{2}$ lbs. \$38.00
No. 40—Square Joint; FULL BOUND; Graduated in inches, 8ths and 16ths; Width, folded, $\frac{3}{4}$ inch; Weight per dozen about 1 $\frac{1}{2}$ lbs. 44.00
No. 40R—RIGHT HAND; Otherwise same as No. 40; Weight per dozen 1 $\frac{1}{2}$ lbs. 44.00

One-half Dozen in a Cardboard Box.

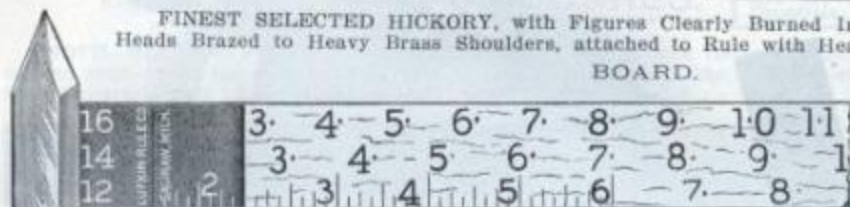
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BOARD AND LOG RULES.



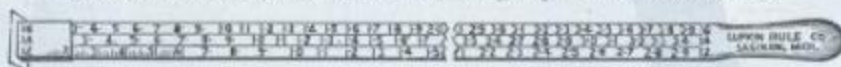
FINEST SELECTED HICKORY, with Figures Clearly Burned In; Tempered and Polished Steel Heads Brazed to Heavy Brass Shoulders, attached to Rule with Heavy Rivets.

BOARD.



No. 300D—Diamond Head; Length 3 feet; Width $1\frac{1}{4}$ inches; 3 Tier; Measures lengths 8 to 18 feet Per Dozen \$23.00

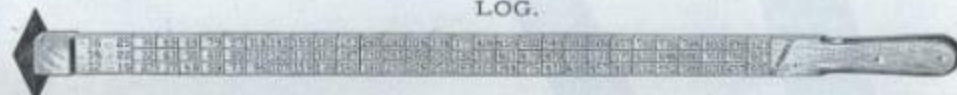
No. 378D—Diamond Head; Length 3 feet; Width $\frac{3}{4}$ inch; 3 Tier; Measures lengths 8 to 18 feet. 23.00
Handles on Above Same as No. 100; Weight per dozen about 6 lbs.



Per Dozen

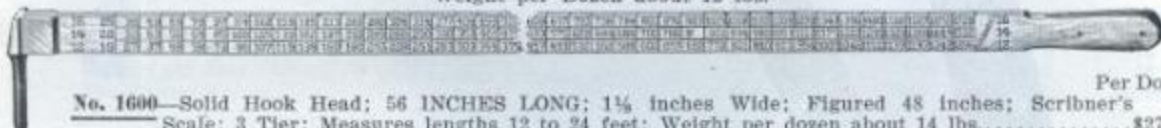
No. 300—Square Head; LENGTH 3 FEET; Width $1\frac{1}{4}$ inches; 3 Tier; Measures lengths 12 to 22 feet..... 23.00
No. 800—Square Head; LENGTH 3 FEET; Width $1\frac{1}{4}$ inches; 4 Tier; Measures lengths 8 to 22 feet..... 25.00
Weight per Dozen about 8 lbs.

LOG.



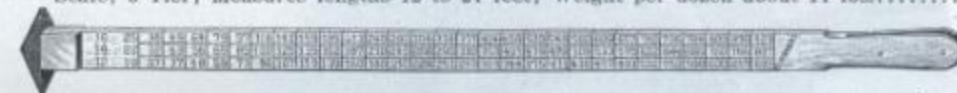
Per Dozen

No. 1400—Square Head; 42 INCHES LONG; $1\frac{1}{4}$ inches Wide; Figured 36 inches; Scribner's Scale, 3 Tier; Measures lengths 8 to 20 feet \$23.00
No. 1500—Square Head; 56 INCHES LONG; $1\frac{1}{4}$ inches Wide; Figured 48 inches; Scribner's Scale; 3 Tier; Measures lengths 12 to 24 feet 27.00
Weight per Dozen about 12 lbs.



Per Dozen

No. 1600—Solid Hook Head; 56 INCHES LONG; $1\frac{1}{4}$ inches Wide; Figured 48 inches; Scribner's Scale; 3 Tier; Measures lengths 12 to 24 feet; Weight per dozen about 14 lbs.....\$27.00



Per Dozen

No. 2400—Square Head; 56 INCHES LONG; $1\frac{1}{4}$ inches Wide; Figured 48 inches; Combined Doyle and Scribner's Scale, 3 Tier; Measures lengths 12 to 24 feet\$27.00
No. 2500—Square Head; 42 INCHES LONG; $1\frac{1}{4}$ inches Wide; Figured 36 inches; Combined Doyle and Scribner's Scale, 3 Tier; Measures lengths 8 to 20 feet 23.00
No. 3400—Square Head; 56 INCHES LONG; $1\frac{1}{4}$ inches Wide; Figured 48 inches; Doyle's Scale, 3 Tier; Measures lengths 8 to 20 feet..... 27.00
No. 3500—Square Head; 42 INCHES LONG; $1\frac{1}{4}$ inches Wide; Figured 36 inches; Doyle's Scale, 3 Tier; Measures lengths 8 to 20 feet 23.00
Weight per Dozen about 12 lbs.

Note.—The Combined Doyle and Scribner Scale Log Rule uses Doyle Figures up to 28 inches Diameter, and Scribner Figures from 29 inches upward.

LOG MEASURES.



Per Dozen

No. 48½—SELECTED AND POLISHED HICKORY; WALKING CANE STYLE; Octagon Shape; Heavy Brass Head and Tip; Doyle Scale; LENGTH 36 INCHES; Thickness at Head $\frac{1}{4}$ inch; Thickness at Tip $\frac{1}{2}$ inch; Weight per dozen about 7 lbs..... \$24.00

Packed Loose.

TRADE MARKS:
E. C. SIMMONS' KEEN KUTTER;
REGISTERED.

SQUARES.

KEEN KUTTER Tools have found their way into the Markets of the World and are Popular in many Foreign Countries.



NOTE—The White Filled Figures and Lines on the Blued Back Ground make KEEN KUTTER Blue Brand Squares easy to read where the light is poor. The Blued Finish prevents the blinding effect noticeable when a polished Steel Square is used in the bright sunlight.

No. K3.

KEEN KUTTER BLUE BRAND*.

One Piece, Weldless, Highest Grade Crucible Steel, with Dark Fire Blued and Lacquered Finish; Markings Filled with White Enamel, and Accurately Cut.

Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Hundredth Scale, and Brace, Octagon and Essex Board Measures; Body 24 inches Long, 2 inches Wide; Tongue, 1 1/2 inches Wide.

Nos.	K/1	K1/16	K1/18
Length of Tongue, inches.....[Assorted	16, 17, 18]	16	18
Weight per dozen about, lbs.....	30	29	32
Per dozen	\$66.00	66.00	66.00

Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Board and Brace Measures; Body 24 inches Long, 2 inches Wide; Tongue 1 1/2 inches Wide.

Nos.	K/3	K3/16	K3/18
Length of Tongue, inches.....[Assorted	16, 17, 18]	16	18
Weight per dozen about, lbs.....	30	29	32
Per dozen	\$55.00	55.00	55.00

No. K10—TONGUE 8 INCHES LONG, 1 inch Wide; Body 12 inches Long, 1 1/2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches; Weight per dozen about 11 lbs.....\$40.00

No. K12—TONGUE 8 INCHES LONG, 1 inch Wide; Body 12 inches Long, 1 1/2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches; Weight per dozen about 11 lbs.....46.00

No. K14—TONGUE 16 INCHES LONG, 1 1/2 inches Wide; Body 24 inches Long, 2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Board Measure; Weight per dozen about 29 lbs.....46.00

No. K18—TONGUE 12 INCHES LONG, 1 inch Wide; Body 18 inches Long, 1 1/2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches; Weight per dozen about 15 lbs.....\$52.00

Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Hundredth Scale, and Brace, Octagon and Essex Board Measures; Body 24 inches Long, 2 inches Wide; Tongue 1 1/2 inches Wide.

Nos.	K/100	K100/16	K100/18
Length of Tongue, inches.....[Assorted	16, 17, 18]	16	18
Weight per dozen about, lbs.....	30	29	30
Per dozen	\$80.00	80.00	80.00

FRAMING, OR RAFTER, WITH PATENT FRAMING TABLES.

Warranted
Accurate
in Cut and
Marking.



No. KF14.

KEEN KUTTER BLUE BRAND*; Framing.

One Piece, Weldless, Highest Grade Crucible Steel, with Dark Fire Blued and Lacquered Finish; Markings Filled with White Enamel, and Accurately Cut.

No. KF1—ASSORTED TONGUES, 16, 17, 18 INCHES LONG, 1 1/2 inches Wide; Body 24 inches Long, 2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Hundredth Scale, and Brace Octagon and Essex Board Measures; Weight per dozen about 30 lbs.....\$94.00

No. KF3—ASSORTED TONGUES, 16, 17, 18 INCHES LONG, 1 1/2 inches Wide; Body 24 inches Long, 2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Board and Brace Measures; Weight per dozen about 30 lbs.....82.00

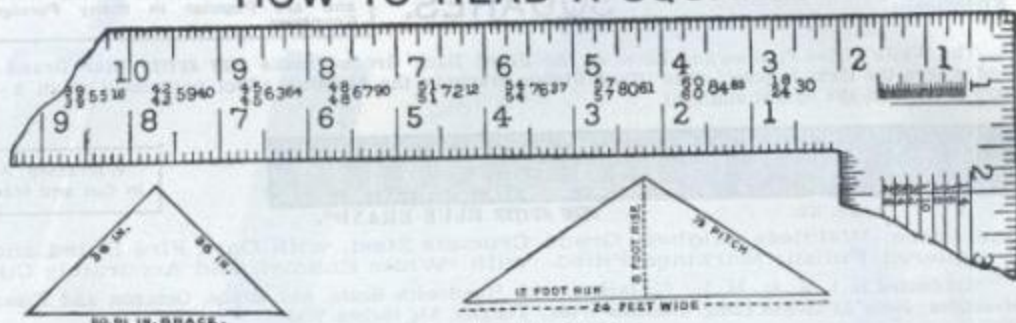
No. KF14—TONGUE 16 INCHES LONG, 1 1/2 inches Wide; Body 24 inches Long, 2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Board Measure; Weight per dozen about 29 lbs... 74.00

No. KF100—ASSORTED TONGUES, 16, 17, 18 INCHES LONG, 1 1/2 inches Wide; Body 24 inches Long, 2 inches Wide; Graduated in 1, 1/2, 3/4, 1/2, 1/4, 1/8 inches, with Hundredth Scale, and Brace, Octagon and Essex Board Measures; Weight per dozen about 30 lbs.....106.00

One-fourth Dozen in a Box; Four Dozen in a Case.

Illustrated Pamphlet, describing the Use, accompanies each Square.

HOW TO READ A SQUARE.

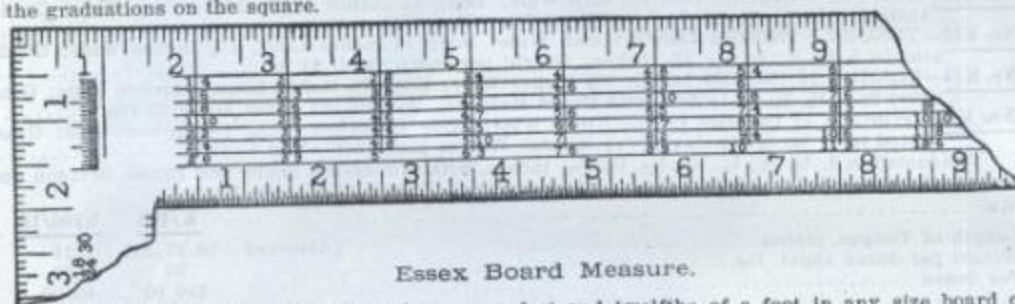


Hundredth Scale.

THE HUNDREDTH SCALE is intended to be used with the brace scale or any tables where decimal fractions occur. It is located near the brace scale. The sub-divisions, or 1-20 inch marks, make it easier to count the fine divisions. This makes it practicable to lay off the exact number of feet, inches, and down to one one-hundredth of an inch required in the table, instead of guessing at it. The length of a rafter pattern may be made with this scale as close as 1-100 of an inch in length.

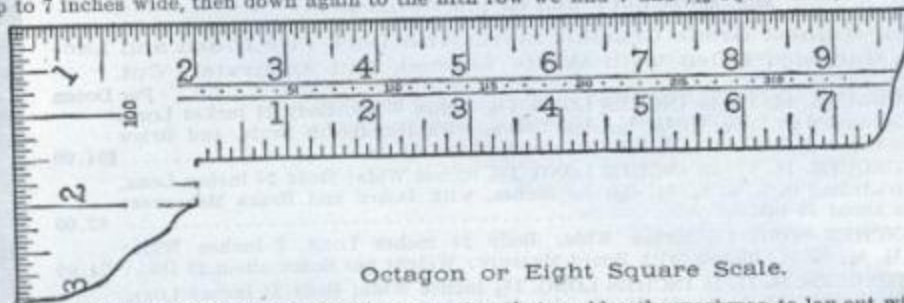
Brace Measure.

THE BRACE MEASURE TABLE is a convenient arrangement of the usual length of braces used in a large range of timber frames, both large and small, covering runs from eighteen inches to sixty inches, by three inches difference in length. The run is given in the two left-hand numbers, as, for instance, $5\frac{1}{2}$ means 54 inches each way from the corner. The length of the brace is given at the right-hand of the $5\frac{1}{2}$ 76.37. This can be laid off on a brace pattern with the use of the hundredth scale accurately without guess work or figuring the decimal into some of the graduations on the square.



Essex Board Measure.

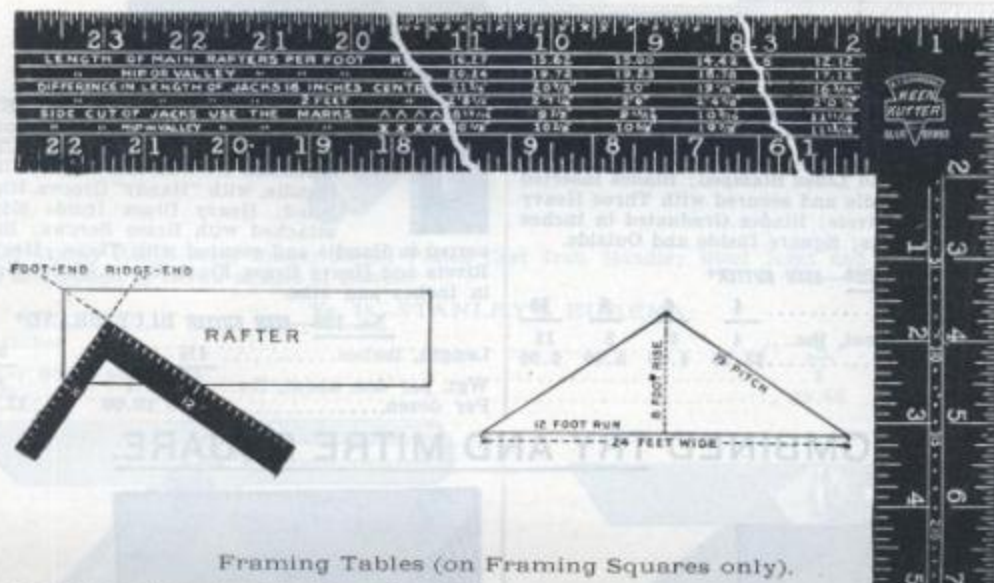
THE ESSEX BOARD MEASURE gives the square feet and twelfths of a foot in any size board or timber. The tables of figures are arranged on inch lines which are made to reach across the whole width of the tables. Boards one inch thick are given in the tables; for any other size multiply the figures given in the tables by the thickness of the timber. The way to read the tables may be learned by the following example: A board 13 feet long, 7 inches wide, 1 inch thick. As a matter of convenience the tables are arranged so that the figures on the inch marks on the top edge form a part of the tables, and may be used for the width of the board or timber. It will be noticed that under the 12 inch mark at the top, the smaller figures, 8, 9, 10, etc., may be used for the lengths, as there are likely to be more widths of boards than lengths. This leads us naturally to look at 12 first, as the length figures are under it. There we find 13 in the fifth longitudinal row; then, looking back on the top to 7 inches wide, then down again to the fifth row we find 7 and $\frac{1}{2}$ square feet, the product of above example.



Octagon or Eight Square Scale.

THE OCTAGON SCALE is arranged on a plan that enables the workman to lay out with a gauge, or in any convenient manner, lines parallel with the four sides of a timber. When the corners are chamfered off to these lines, there will be eight equal sides on the timber. The end may be used, or if the chamfer does not come to the end a center line may be drawn through the length to be cut octagon, and the corner lines laid off by the scale. The rule is to take $\frac{5}{8}$ of the width of the timber and lay it off each side of the center, then cut off the corners up to the line; thus the marks on the square are 5-24 inch apart for one inch square. Simply set the dividers into the first and fifth marks for a five inch square, etc.

HOW TO READ A SQUARE. (Continued.)



Framing Tables (on Framing Squares only).

Framing tables on the trade mark side, or face of the square.

The six rows of figures on the body, or widest blade, are each lettered at the left end of the body indicating their use.

FIRST: Look at the inch line figures on the outside, or top edge, of the body for the figure that is the same as the rise of your roof. Under this figure will be found all the figures giving lengths of rafters and all side cuts. The run is 1 foot on every table. There are seventeen of these tables, commencing at 2 inches and continuing to 18 inches.

FOR EXAMPLE: Take 8 inches rise to the foot or third pitch under the 8 inch line figure. For length of common rafters, use the first figures in the table, 14.42 inches, multiply by half the width of the building, which will give the whole length of the rafters. Suppose the width to be 20 feet, the rafters would be 144.20 inches long, or 12.01 feet.

FOR LENGTH OF "HIP" OR "VALLEY" rafter use the second figures, 18.78 inches, and again multiply by half the width of the building, 10 feet, and the result, 187.8 inches, is the length required. For top and bottom cuts of rafters, common and "Jacks," use the 8 inch and 12 inch marks on body and tongue, either way as most convenient. (The 8 inches is the vertical, or top, of the rafter, and the 12 inches is the horizontal, or bottom.) For "Hip" and "Valley" rafters, use 8 inches and 17 inches, proceeding same as before.

FOR LENGTH OF "JACK" RAFTERS, using third pitch as in previous example, the third number in the 8 inch table, 19 1/4 inches, is the length of the first "Jack" when they are spaced 16 inches between centers, and also the difference between the lengths of the others, each one 19 1/4 inches longer than the one nearer the first one.

The fourth figure in the same 8 inch table, 2 feet 4 1/2 inches, is the length of the first "Jack" rafter 2 feet between centers, also the difference in length of the others.

FOR SIDE CUT ON "JACKS," ETC., the fifth figures in the table under the 8 inch mark are 10 3/16 inches. These refer to the graduation marks on the outside edge of the body. Put that 10 3/16 inch mark on the edge of the "Jack" and the 12 inch mark on the tongue on the same edge, mark the tongue for side cut of "Jack." This also gives the right angle to cut plancier and mouldings on the jet that run up the gable. The level plancier and moulding cuts, roof boards and shingles can be marked on the body side of square or the references transposed, using the 12 inch on the body and the body reference given in the table on the tongue.

"HIP" AND "VALLEY" rafter side cuts are marked by using the last figure in the table same as before.

Please notice that the 12 inch mark on the tongue is always used in all angle cuts, both top and bottom and side cuts, thus leaving the workman but one number to remember when laying out side or angle cuts. This is the figure taken from the fifth or sixth number in the table. The cuts come always on the right hand or tongue side. When marking boards these can be reversed for convenience at any time by taking the 12 inch mark on the body and using the body reference on the tongue.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

TRY SQUARES.



High Class
Tools.

HIGHEST GRADE CRUCIBLE STEEL,
Extra Heavy Blade; with Cast Iron
Handle, FULL NICKEL PLATED; Fig-
ures and Lines Stamped; Blades Inserted
in Handle and secured with Three Heavy
Iron Rivets; Blades Graduated in inches
and 8ths; Square Inside and Outside.

No. 220—KEEN KUTTER*

Length, inches.....	4	6	8	10
Weight per dozen about, lbs....	4	6	8	12
Per dozen.....	\$3.25	4.00	5.00	6.00



HIGHEST GRADE CRUCIBLE STEEL,
Extra Heavy Blade, Polished and Blued;
FIGURES AND LINES CLEARLY
MARKED IN WHITE; Selected Rosewood
Handle, with "Handy" Groove, Highly Pol-
ished; Heavy Brass Inside Edge Plate
attached with Brass Screws; Blades in-
serted in Handle and secured with Three Heavy Iron
Rivets and Heavy Brass Flush Burs; Blades Graduated
in inches and 8ths.

No. 120—KEEN KUTTER BLUE BRAND*

Length, inches.....	4½	6	9	12
Wgt. per doz. about, lbs....	4	5	8	11
Per dozen.....	\$7.50	10.00	13.00	17.00

COMBINED TRY AND MITRE SQUARE.



Rolled Steel Blade, Polished; Figures
and Lines Stamped; Nickel Plated Cast
Iron Handle; Blade inserted in Handle
and secured with Three Iron Rivets;
Blade Graduated in inches and 8ths.

No. 1—STANLEY'S.

Length, inches.....	4	6	8
Weight per dozen about, lbs.....	3¼	4½	8
Per dozen.....	\$5.00	6.35	7.50



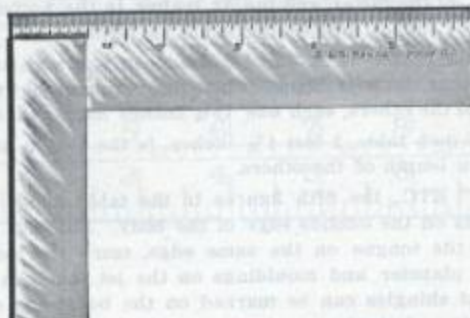
Rolled Steel Blade, Blued Finish; Fig-
ures and Lines Stamped; Polished Rose-
wood Handle, with "Handy" Groove;
Brass Inside Edge Plate attached to
Handle with Brass Pins; Blade inserted
in Handle and secured with Two Iron
Rivets; Blade Graduated in inches and 8ths.

No. 2—WINTERBOTTOM'S.

Length, inches.....	4½	6	7½	9
Weight per dozen about, lbs....	3	4	6	7
Per dozen.....	\$5.40	6.00	7.20	8.40

One-half Dozen in a Cardboard Box.

STEEL SQUARES.



Steel, Natural Finish; Graduated in 32nds on Both Corners of the Outside Edge.

No.	590	592	594	596	598
Length of Blade, inches.....	3	4	6	9	12
Width of Blade, inches.....	¾	1 5/16	1 ¾	1 ¾	1 13/16
Length of Beam, inches.....	2	2 9/16	3 ¾	5	6 1/16
Weight per dozen about, lbs.....	3	5	10 ½	21	30
Per dozen.....	\$24.00	30.00	40.00	72.00	84.00

Packed Loose.

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SLIDING T BEVELS.

Nickel Plated Rolled Steel Blade; Nickel Plated Cast Iron Handle; Steel Joint and Clamp Screw; Blade Clamped in Position by Screw at End of Handle.

No. 18—STANLEY'S EUREKA.

Length, inches	6	8	10
Weight per dozen about, lbs.....	5	6	7
Per dozen	\$6.60	\$8.40	\$9.10



Rolled Steel Blued Finish Blade; Polished Rosewood Handle; Brass Tips on Handle; Brass Thumb Screw; Steel Joint Screw; Blade Clamped in position by Thumb Screw at Joint; "Handy" Groove in Handle.

No. 25H—STANLEY'S.

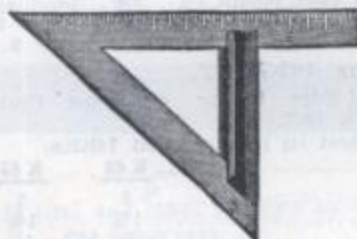
Length, inches	6	8	10	12
Weight per dozen about, lbs.....	2½	3	4	6
Per dozen	\$3.95	4.30	4.65	5.00



Rolled Steel Blued Finish Blade; Polished Rosewood Handle; Brass Tips on Handle; Brass Thumb Screw; Steel Joint Screw; Blade Clamped in position by Thumb Screw at Joint.

No. 25—DISSTON'S.

Length, inches	6	10	12
Weight per dozen about, lbs....	3	4	5
Per dozen	\$5.75	6.75	7.50

MITRE SQUARES.**FOX'S.**

No. 50—Length 10 inches; Rolled Steel Nickel Plated Blade and Handle; Figures and Lines Stamped; Blade attached to Handle with Two Iron Rivets; Graduated in inches and 8ths; Weight per dozen about 6 lbs.....\$12.00

Per Dozen

One-half Dozen in a Cardboard Box.



Nickel Plated Rolled Steel Blade; Nickel Plated Cast Iron Handle; Blade attached to Handle with Four Iron Rivets.

No. 16—STANLEY'S.

Length, inches	8	10
Weight per dozen about, lbs.....	8	9
Per dozen	\$7.70	8.80

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

MT



TAPE LINES.



KEEN KUTTER® CHESTERMAN PATTERN.

Finest Grain Kip Leather, Black Glaze Finish; Brass Mountings, Nickel Plated; Extended Folding Handle; Best WOVEN LINEN Tape, with Metallic Warp and Waterproof Enamel; Inch Figures and Lines in Black, and Feet in Red markings; Width of Tape $\frac{5}{8}$ inch; Graduated in Feet and Twelfths.

Nos.	K 51	K 52	K 53	K 50
Length of Tape, feet	25	50	75	100
Diameter of Case, inches	$3\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	$5\frac{1}{4}$
Weight per dozen about, lbs.	6	$9\frac{1}{4}$	$12\frac{3}{4}$	$15\frac{3}{4}$
Per dozen	\$27.00	36.00	48.00	60.00

GRADUATED IN 10ths and 100ths OF FEET ON ONE SIDE, FOR SURVEYORS' USE.

Nos.	K51/S	K52/S	K53/S	K50/S
Length of Tape, feet	25	50	75	100
Diameter of Case, inches	$3\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	$5\frac{1}{4}$
Weight per dozen about, lbs.	6	$9\frac{1}{4}$	$12\frac{3}{4}$	$15\frac{3}{4}$
Per dozen	\$27.00	36.00	48.00	60.00

One-twelfth Dozen in a Cardboard Box.



BLUE BRAND® REGULAR.

FINE BLUE ENAMELED STEEL CASE, with Brass Binding and Mountings; Oil Finished Heavy Warp COTTON TAPE, marked in Clear Blue Color; Folding Brass Winding Handle; Width of Tape $\frac{1}{2}$ inch; Graduated in inches and 4ths on one side.

Nos.	6025	6050	6066	6075	6100
Length of Tape, feet	25	50	66	75	100
Diameter of Case, inches	$2\frac{3}{4}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$
Wgt. per doz. about, lbs.	3	$4\frac{1}{2}$	6	6	7
Per dozen	\$3.75	5.00	6.00	7.50	9.00



BLUE BRAND® RAILROAD.

FINE BLUE ENAMELED STEEL CASE, with Brass Binding and Mountings; Oil Finished Extra Heavy Warp COTTON TAPE with TEN STRANDS OF HEAVY LINEN THREAD interwoven lengthwise through entire Length; Figures and Lines marked in Clear Blue Color; Folding Brass Winding Handle; Width of Tape $\frac{9}{16}$ inch; Graduated in inches and 4ths on one side.

Nos.	25RR	50RR	66RR	75RR	100RR
Length of Tape, feet	25	50	66	75	100
Diameter of Case, inches	$2\frac{3}{4}$	$3\frac{1}{2}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{3}{4}$
Wgt. per doz. about, lbs.	3	$4\frac{1}{2}$	6	6	7
Per dozen	\$5.00	6.75	8.00	9.50	12.00

KEEN KUTTER POCKET.

Nickel Plated Brass Case, Round Edge, Spring Wind and Center Stop; Marked on One Side; Width of Tape $\frac{1}{4}$ inch.

Steel Tape, Graduated in inches and 16ths.

Nos.	K 43	K 45	K 48
Length, feet	3	5	8
Diameter of Case, inches	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$
Weight per dozen about, lbs.	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$
Per dozen	\$9.00	12.00	18.00

Linen Tape, Graduated in inches and 8ths.

Nos.	K 73	K 75
Length, feet	3	5
Diameter of Case, inches	$1\frac{1}{8}$	$1\frac{1}{4}$
Weight per dozen about, lbs.	$\frac{3}{4}$	1
Per dozen	\$4.00	6.00

One-half Dozen in a Cardboard Box.



TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

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TAPE LINES.



KEEN KUTTER®

Finest Grain Kip Leather, Black Glaze Finish; Brass Mountings, Nickel Plated; Extended Folding Handles; Finest Quality STEEL TAPE, $\frac{3}{4}$ INCH WIDE; Graduated in Feet, Twelfths (Inches and Eighths). Instantaneous Markings, so that The Feet and Inch readings are always before the eye. SEE ILLUSTRATION.

Nos.	K 61	K 62	K 63	K 60
Length of Tape, feet.....	25	50	75	100
Diameter of Case, inches...	2 $\frac{3}{4}$	3 $\frac{1}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$
Weight per dozen about, lbs.	5 $\frac{1}{4}$	8	12	14 $\frac{1}{4}$
Per dozen	\$48.00	60.00	72.00	84.00

These Tapes have the Improved Method of marking, which overcomes the usual errors and annoyances in reading the Old Style Tape Line. The chief difficulty in reading a Steel Tape arises from the fact that the Bright Surface of the figures requires one to get just the proper light to distinguish them. In taking a measurement, the total length usually falls somewhere between the exact feet, and the reading before the eye is for the fraction of a foot only. It becomes necessary, therefore, to refer back to the foot figure before the total reading can be had. In doing this, in nine cases out of ten, the fractional reading is lost or forgotten and it is necessary to take a second measure to avoid error. This Improved Method consists of the repetition of a Foot Reading at every inch, in figures, easily distinguished from the subdivision figures, thereby bringing the Total Reading instantaneously before the eye. For instance, suppose the total length measured should fall at 46 feet, 7 $\frac{1}{4}$ inches, the reading on the tape would appear as in the cut below.



GRADUATED IN 10ths AND 100ths OF FEET ON ONE SIDE
FOR SURVEYORS' USE.

Nos.	±K61/S	±K62/S	±K63/S	±K60/S
Length of Tape, feet....	25	50	75	100
Diameter of Case, inches.	2 $\frac{3}{4}$	3 $\frac{1}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$
Weight per doz. about, lbs.	5 $\frac{1}{4}$	8	12	14 $\frac{1}{4}$
Per dozen.....	\$48.00	60.00	72.00	84.00

One-twelfth Dozen in a Cardboard Box.



KEEN KUTTER® JUNIOR.

A First-class Durable Steel Tape, Light, Compact and about One-half the Size and Weight of our regular KEEN KUTTER Steel Tape Lines. Finest Grain Kip Leather, Black Glaze Finish. Brass Mountings, Nickel Plated; Extended Folding Handles; Fine STEEL TAPE $\frac{3}{4}$ INCH WIDE; Graduated in Feet, Twelfths (inches and eighths).

Nos.	K 81	K 82	K 83	K 80
Length of Tape, feet.....	25	50	75	100
Diameter of Case, inches.....	2 $\frac{3}{4}$	2 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$
Weight per dozen about, lbs....	2 $\frac{3}{4}$	4 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{4}$
Per dozen	\$39.00	48.00	60.00	78.00

GRADUATED IN 10ths and 100ths OF FEET ON ONE SIDE
FOR SURVEYORS' USE.

Nos.	±K81/S	±K82/S	±K83/S	±K80/S
Length of Tape, feet....	25	50	75	100
Diameter of Case, inches	2 $\frac{3}{4}$	2 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{4}$
Weight per doz. about, lbs	2 $\frac{3}{4}$	4 $\frac{1}{2}$	6 $\frac{1}{2}$	8 $\frac{1}{4}$
Per dozen.....	\$39.00	48.00	60.00	78.00

One-twelfth Dozen in a Cardboard Box.



WADLEIGH'S-LUMBERMAN'S.

No. 110—Heavy Polished Brass Case and Mountings; FINE LINEN TAPE; Brass Winding Knob; Width of Tape $\frac{9}{16}$ inch; LENGTH OF TAPE 50 FEET; Figures and Lines marked Black; Combination Graduation in feet, inches and Board Measure; Figured to measure boards, Lengths 12, 14, 16, 18 and 20 feet; Diameter of Case 3 $\frac{1}{4}$ inches; Weight per dozen about 7 lbs.....\$30.00

One-half Dozen in a Cardboard Box.

TAPES ONLY.

No. 110T—TAPES ONLY; To fit Cases of No. 110
Tape Lines\$18.00
One-twelfth Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

DIVIDERS.



KEEN KUTTER*

Forged from Highest Grade Crucible Steel, Oil Tempered, Full Nickel Plated.

No. 10—KEEN KUTTER*.

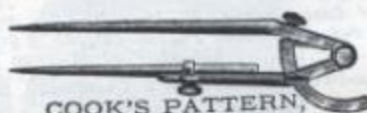
Length, inches	6	7	8	10	12
Wgt. per doz. about, lbs.	3½	4½	5	8½	10
Per dozen	\$5.50	6.50	7.50	10.00	12.00

No. 1—STANDARD.

Forged from Tool Steel; Tempered and Polished; Brass Joints.

Length, inches	6	7	8	10	12
Wgt. per doz. about, lbs.	3½	4½	5	8½	10
Per dozen	\$5.50	6.50	7.50	10.00	12.00

6, 7 and 8 inch, One Dozen; 10 and 12 inch, One-half Dozen in a Cardboard Box.



COOK'S PATTERN,

Extension, with One Movable Leg.

Forged from Tool Steel, Tempered and Polished; Movable Leg can be Adjusted to different lengths, or a Pencil can be substituted in its place.

No. 2—COOK'S.

Length, inches	6	7	8
Weight per dozen about, lbs.	4	4½	5
Per dozen	\$9.00	10.00	11.00

PENCIL CLASPS.



Showing Clasp as used. Per Dozen

No. 8—STANLEY'S: Length 1 inch; Malleable Iron, Nickel Plated; For use on Compass or Dividers; Weight per dozen about ½ lb. \$1.25
One Dozen on an Easel Card; Two Cards in a Box.



PENCIL COMPASSES.

This Handy Pencil Compass, is used by Carpenters, Mechanics, Draughtsmen, etc.; can be carried in Pocket for constant use.

No. 8999—EXCELSIOR: Set Screw Adjustment; Stamped Steel Nickel Plated Holder; Polished Tool Steel Tempered Point; Weight per dozen about ½ lb. \$3.00
One Dozen in a Package



KEEN KUTTER* SPRING,
With Solid Nut.

Highest Grade Crucible Steel, Polished and Tempered; Strong Steel Spring.

Nos.	K 64	K 66	K 68
Length, inches	4	6	8
Weight per dozen about, lbs.	1	3¼	4½
Per dozen	\$9.00	10.20	12.00

One-quarter Dozen in a Cardboard Box.



STARRETT'S Yankee Spring, Solid Nut.

Forged from High Grade Tool Steel, Tempered and Polished; Heavy Steel Spring at Head.

No. 83—STARRETT'S.

Length, inches	3	4	6
Weight per dozen about, lbs.	1	1½	2½
Per dozen	\$8.40	9.00	10.20



STARRETT'S EXTENSION,
With Two Movable Legs.

Forged from High Grade Tool Steel, Tempered and Polished; Legs can be Adjusted to different lengths, or a Pencil can be substituted in place of either one.

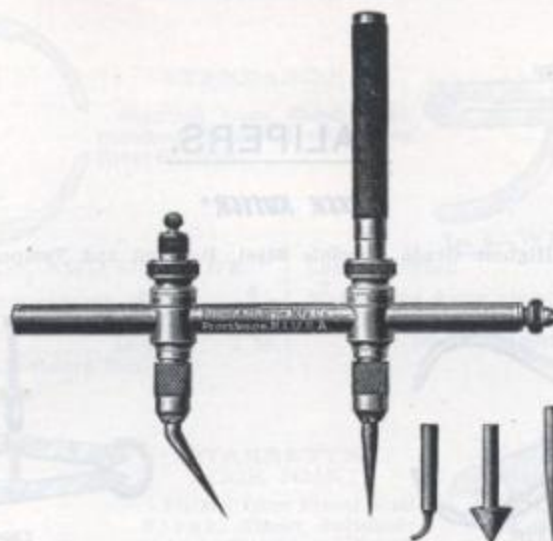
No. 85—STARRETT'S.

Length, not extended, inches	7	9
Weight per dozen about, lbs.	8	12
Per dozen	\$15.00	18.00



Per Dozen

UNIVERSAL DIVIDERS.



Steel, Natural Finish. The Scriber Point Holder has both Fine and Quick Adjustment; The Fine Adjustment is obtained by a Screw enclosed in a Beam, which engages the Nut on the Scriber Point Holder. The Scriber Point is Adjustable either side of the center. The Posts are Clamped by Knurled Nuts and held in place by Spring Friction when the Nuts are unclamped for setting the Joints. A "V" Point is furnished for use in Describing a Circle about a hole already drilled. A Caliper Point is also included. The Beam is 4 inches Long and the Points can be set to describe a Circle 8 inches in diameter.

No. 856—Weight each about 4 ozs.....	Each
	\$3.00
Packed Loose.	

EXTENSION DIVIDERS.



Bronzed Body with Steel Points, Nickel Plated; A Common Pencil fits either Socketed Leg, while an Auxiliary Holder fits Reversed End of either Short Point for an Extension. The Head, with Short Point is 8 inches Long and may be extended 2 inches more; Will Caliper 10 inches Outside and 12½ inches Inside. With Short Points it will scribe a 24 inch and with Long Points a 34 inch Circle.

No. 90B—Complete with Short and Long Points; Weight each about 1½ lbs..	Each
	\$2.25



Head and Arms made of Malleable Iron, and the rest Steel, Polished; A Common Pencil fits either Socketed Leg; The Smallest Size is 7 inches Long; Can be Adjusted to 9 inches and will Scribe a 22 inch Circle; Will Caliper 11 inches Outside and 13 inches Inside. The Second Size is 9 inches Long and can be Adjusted to 12 inches and will Scribe a 30 inch Circle and Caliper 14 inches Outside and 16 inches Inside.

No. 85C—7 INCH; Complete as described Above;	Each
Weight each about 1 lb.....	\$2.25
No. 85D—9 INCH; Complete as Described Above;	
Weight each about 1½ lbs.....	2.50
No. 85A—7 INCH; WITH DIVIDER LEGS ONLY;	
Weight each about ¾ lb.....	1.25
No. 85B—9 INCH; WITH DIVIDER LEGS ONLY;	
Weight each about 1 lb.....	1.50

One in a Cardboard Box.

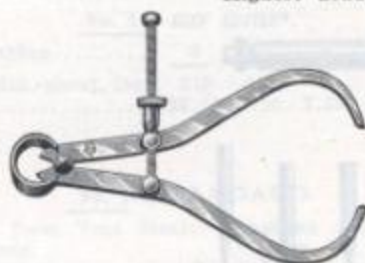
TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.



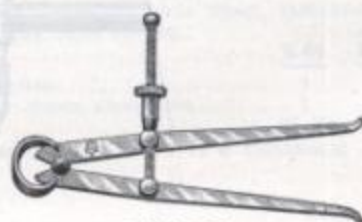
CALIPERS.

KEEN KUTTER®

Highest Grade Crucible Steel, Polished and Tempered.



OUTSIDE.



INSIDE.

Spring; Solid Nut.

Nos.	K 34	K 36	K 38
Length, inches	4	6	8
Weight per dozen about, lbs.	1 3/4	3 1/2	4 3/4
Per dozen	\$9.00	10.20	12.00

Nos.	K 24	K 26	K 28
Length, inches	4	6	8
Weight per dozen about, lbs.	1 3/4	3	4 1/2
Per dozen	\$9.00	10.20	12.00



OUTSIDE.



INSIDE.

Firm Joint.

Nos.	K 46	K 48	K 410
Length, inches	6	8	10
Weight per dozen about, lbs.	2 1/2	4 1/2	6
Per dozen	\$7.80	9.60	10.80

Nos.	K 412	K 414	K 416
Length, inches	12	14	16
Weight per dozen about, lbs.	10	11 1/2	18
Per dozen	\$12.00	18.00	21.00

Nos.	K 56	K 58	K 510
Length, inches	6	8	10
Weight per dozen about, lbs.	2	4	5
Per dozen	\$7.80	9.60	10.80

Nos.	K 512	K 514	K 516
Length, inches	12	14	16
Weight per dozen about, lbs.	8 1/4	9 1/2	14
Per dozen	\$12.00	18.00	21.00

One-fourth Dozen in a Cardboard Box.

CALIPERS.

MT



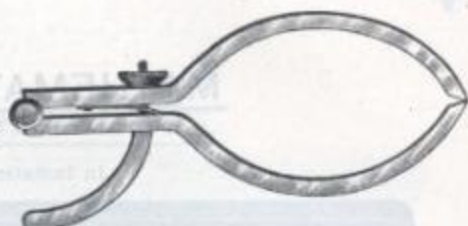
STANDARD.

Stamped from Sheet Steel,
Polished; Heavy Beveled Iron
Rivet at Joint.

No. 9—DOUBLE INSIDE AND OUTSIDE.

Length, inches	4	6
Weight per dozen about, lbs.	1	2
Per dozen	\$4.00	5.50

One Dozen in a Cardboard Box.



No. 5—WING OUTSIDE.

Length, inches	6
Weight per dozen about, lbs.	3
Per dozen	\$7.00

One-half Dozen in a Cardboard Box.



STARRETT'S. LOCK JOINT.

Forged from Finest Tool
Steel, Finely Polished;
Heavy Clamping Thumb
Screw at Joint.



No. 37—STARRETT'S INSIDE TRANSFER.

Length, inches	4	6	8	10	12
Wgt. dozen about, lbs.	2	3½	6	8	12
Per dozen	\$15.00	18.00	21.00	24.00	27.00

Can be used as a Common Caliper and also for use inside of chambered cavities, over flanges, etc.; Removed and replaced without losing the Size Caliper. This is done by loosening the Nut binding one Arm to the Auxiliary Leaf and Swinging it out or in while the Joint is locked, to clear the obstruction, then moving it back against stop, where it will show the exact size measured.

One-quarter Dozen in a Cardboard Box.

No. 36—STARRETT'S OUTSIDE TRANSFER.

Length, inches	4	6	8	10	12
Wgt. dozen about, lbs.	3	4	6	8	12
Per dozen	\$15.00	18.00	21.00	24.00	27.00



FIRM JOINT. HERMAPHRODITE.

Tempered Steel, Natural Finish, with Adjustable Point.

Nos.	1054	1055	1056
Length, inches	4	6	8
Weight per dozen about, lbs.	1½	2¼	4¼
Per dozen	\$7.80	9.60	12.00

Packed Loose.



SPRING; KEYHOLE. Polished Steel; Solid Nut.

Nos.	969	971
Length, inches	3	4
Weight per dozen about, lbs.	1½	2
Per dozen	\$12.00	13.20

DOUBLE; POLISHED STEEL.

This Instrument, as will be seen from the illustration, is a Combination of a Divider, an Inside and Outside Caliper. It has Starrett's Improved Firm Friction Joints.

No. 44.

Length, inches	6	8
Weight each about, ozs.	7	10
Per dozen	\$15.00	18.00

One-quarter Dozen in a Cardboard Box.





MATHEMATICAL INSTRUMENTS.

NICKEL PLATED.

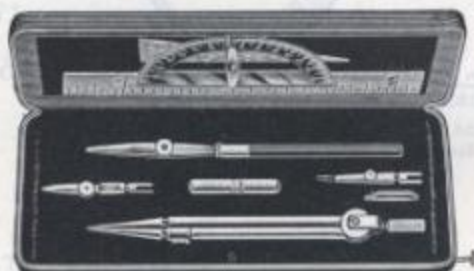
In Imitation Morocco Covered Cases, Velvet Lined.



No. 40—Size of Case $6\frac{1}{2} \times 2\frac{3}{4}$ inches; Weight per set about 5 ozs. Per Set \$1.39

Contents:

- 1 5 inch Divider,
- 1 Extra Pen and Pencil Point,
- 1 $5\frac{1}{2}$ inch Rule,
- 1 Triangle,
- 1 Protractor,
- 1 Box Leads,
- 1 Screw Driver.



No. 41—Size of Case $6\frac{1}{2} \times 2\frac{3}{4}$ inches; Weight per set about 5 ozs. Per Set \$1.65

Contents:

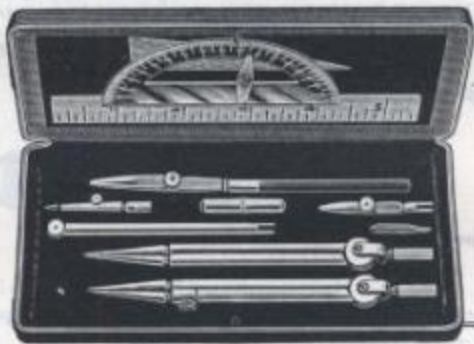
- 1 5 inch Divider,
- 1 Extra Pen and Pencil Point,
- 1 5 inch Ruling Pen,
- 1 $5\frac{1}{2}$ inch Rule,
- 1 Triangle,
- 1 Protractor,
- 1 Box Leads,
- 1 Screw Driver.



No. 43—Size of Case $6\frac{1}{2} \times 3$ inches; Weight per set about 6 ozs. Per Set \$2.00

Contents:

- 2 5 inch Dividers,
- 1 Extra Pen and Pencil Point,
- 1 5 inch Ruling Pen,
- 1 $5\frac{1}{2}$ inch Rule,
- 1 Triangle,
- 1 Protractor,
- 1 Box Leads,
- 1 Screw Driver.



No. 44—Size of Case $6\frac{1}{2} \times 3\frac{1}{4}$ inches; Weight per set about 7 ozs. Per Set \$2.25

Contents:

- 2 5 inch Dividers,
- 1 Extra Pen and Pencil,
- 1 5 inch Ruling Pen,
- 1 Lengthening Bar,
- 1 $5\frac{1}{2}$ inch Rule,
- 1 Triangle,
- 1 Protractor,
- 1 Box Leads,
- 1 Screw Driver.

Packed Loose.



MATHEMATICAL INSTRUMENTS.

NICKEL PLATED.

In Imitation Morocco Covered Cases, Velvet Lined.



Per Set

No. 45—Size of Case $3\frac{1}{4} \times 3\frac{1}{2}$ inches; Weight per set about 8 ozs. \$3.15

Contents:

- | | | |
|-------------------------------|---------------------------------------|-----------------|
| 1 5 inch Divider, | 1 5 inch Ruling Pen, | 1 Protractor, |
| 1 5 inch Compass, | 1 $3\frac{3}{4}$ inch Spring Bow Pen, | 1 Box Leads, |
| 1 Extra Pen and Pencil Point, | 1 $5\frac{1}{2}$ inch Rule, | 1 Screw Driver. |
| 1 Lengthening Bar, | 1 Triangle, | |

GERMAN SILVER AND STEEL.

In Leather Covered Cases, Velvet Lined.



Per Set

No. 11—Size of Case 7x3 inches; Weight per set about 7 ozs. \$3.00

Contents:

- 1 6 inch Divider,
- 1 Extra Pen and Pencil Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 Box Leads,
- 1 Screw Driver.



Per Set

No. 12—Size of Case $8 \times 3\frac{1}{2}$ inches; Weight per set about 9 ozs. \$4.50

Contents:

- 1 6 inch Divider,
- 1 6 inch Compass,
- 1 Extra Pen Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 $3\frac{3}{4}$ inch Spring Bow Pen,
- 1 Box Leads,
- 1 Screw Driver.

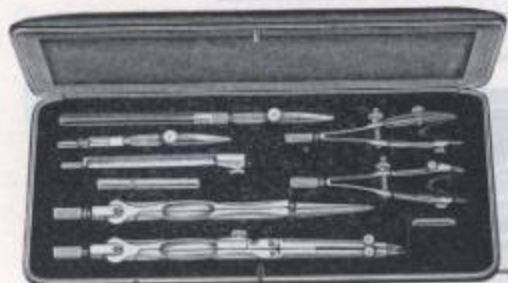
Packed Loose.



MATHEMATICAL INSTRUMENTS.

GERMAN SILVER AND STEEL.

In Leather Covered Cases, Velvet Lined.

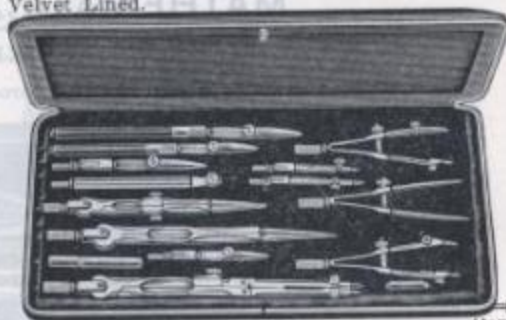


Per Set

No. 13—Size of Case $8\frac{1}{2} \times 3\frac{1}{2}$ inches; Weight per set about 10 ozs. \$5.25

Contents:

- 1 6 inch Divider,
- 1 6 inch Compass,
- 1 Extra Pen Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 $3\frac{1}{4}$ inch Spring Bow Pen,
- 1 $3\frac{1}{4}$ inch Spring Bow Pencil,
- 1 Box Leads,
- 1 Screw Driver.

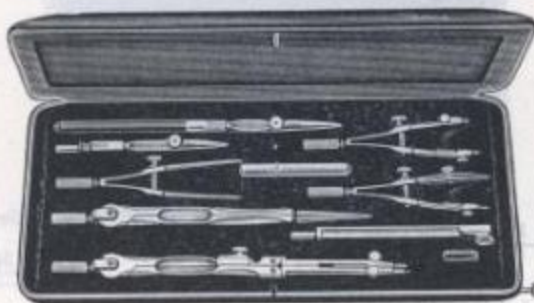


Per Set

No. 5—Size of Case $9\frac{1}{4} \times 4\frac{3}{4}$ inches; Weight per set about 14 ozs. \$9.00

Contents:

- 1 6 inch Divider,
- 1 6 inch Compass,
- 1 $4\frac{1}{4}$ inch Compass,
- 2 Extra Pen Points,
- 1 Extra Pencil Point,
- 1 Extra Needle Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 $4\frac{1}{4}$ inch Ruling Pen,
- 1 $3\frac{1}{4}$ inch Spring Bow Spacer,
- 1 $3\frac{1}{4}$ inch Spring Bow Pen,
- 1 $3\frac{1}{4}$ inch Spring Bow Pencil,
- 1 Box Leads,
- 1 Screw Driver.

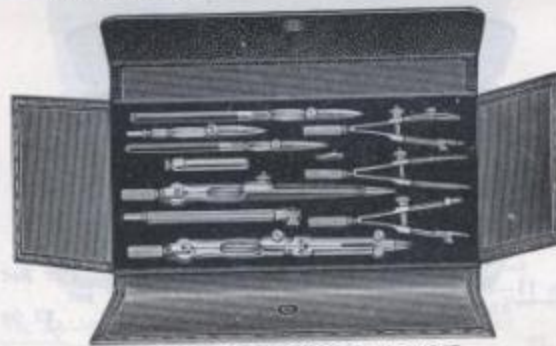


Per Set

No. 14—Size of Case $8\frac{1}{2} \times 4$ inches; Weight per set about 11 ozs. \$6.00

Contents:

- 1 6 inch Divider,
- 1 6 inch Compass,
- 1 Extra Pen Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 $3\frac{1}{4}$ inch Spring Spacer,
- 1 $3\frac{1}{4}$ inch Spring Bow Pen,
- 1 $3\frac{1}{4}$ inch Spring Bow Pencil,
- 1 Box Leads,
- 1 Screw Driver.



FOLDING POCKET CASE.

Per Set

No. 25—Size of Case $8\frac{1}{2} \times 4\frac{1}{4}$ inches; Weight per set about 12 ozs. \$11.00

Contents:

- 1 6 inch Divider,
- 1 6 inch Compass,
- 1 Extra Pen Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 $4\frac{1}{4}$ inch Ruling Pen,
- 1 $3\frac{1}{2}$ inch Spring Bow Spacer,
- 1 $3\frac{1}{2}$ inch Spring Bow Pen,
- 1 $3\frac{1}{2}$ inch Spring Bow Pencil,
- 1 Box Leads,
- 1 Screw Driver.

Packed Loose.

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MATHEMATICAL INSTRUMENTS.

Highest Grade German Silver and Steel.

In Genuine Morocco Folding Pocket Cases, Velvet Lined.



No. 23—Size of Case $8\frac{1}{2} \times 3$ inches; Weight per set about 9 ozs. Per Set \$12.00

Contents:

- 1 6 inch Divider,
- 1 6 inch Compass,
- 1 Extra Pen Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 $3\frac{1}{2}$ inch Spring Bow Pen,
- 1 Box Leads,
- 1 Screw Driver.



No. 24—Size of Case 9×4 inches; Weight per set about 11 ozs. Per Set \$15.00

Contents:

- 1 6 inch Divider,
- 1 6 inch Compass,
- 1 Extra Pen Point,
- 1 Lengthening Bar,
- 1 5 inch Ruling Pen,
- 1 $4\frac{1}{4}$ inch Ruling Pen,
- 1 $3\frac{1}{2}$ inch Spring Bow Spacer,
- 1 $3\frac{1}{2}$ inch Spring Bow Pen,
- 1 $3\frac{1}{2}$ inch Spring Bow Pencil,
- 1 Box Leads,
- 1 Screw Driver.



DIVIDERS.

Polished Brass Legs, with Steel Tips.

No. D204— $5\frac{1}{2}$ INCH; Weight per dozen about $1\frac{1}{4}$ lbs. Per Dozen \$6.00

No. 205—6 INCH; Weight per dozen about $1\frac{1}{2}$ lbs. 7.20



SPRING BOW SPACER.

German Silver; Metal Handle.

No. 176— $3\frac{1}{2}$ INCH; Weight per dozen about $\frac{3}{4}$ lb. Per Dozen \$12.00



SPRING BOW PEN.

German Silver; Metal Handle.

No. 178— $3\frac{1}{2}$ INCH; Weight per dozen about $\frac{3}{4}$ lb. Per Dozen \$18.00



No. 179.



No. 182.

RULING PENS.

German Silver; Bone Handle.

No. 179—5 INCH; WITH FAST JOINT; Weight per dozen about $\frac{3}{4}$ lbs. Per Dozen \$4.00

No. 181— $4\frac{1}{2}$ INCH; WITH HINGED BLADE; Weight per dozen about $\frac{3}{4}$ lbs. 10.00

No. 182—5 INCH; WITH HINGED BLADE; Weight per dozen about $\frac{1}{2}$ lbs. 10.00

Packed Loose.



TRIANGLES.



No. 284



No. 285



No. 286



No. 287

POLISHED PEAR-WOOD; Open Center; Joints Framed and Glued.

No. 284—Angles 30, 60 and 90 Degrees.

Height, inches	7	9	11	13
Weight per dozen about, lbs.	1/2	3/4	1	1 1/4
Per dozen	\$5.00	6.00	7.20	9.60

No. 285—Angles 45, 45 and 90 Degrees.

Height, inches	5	7	9	11
Weight per dozen about, lbs.	1/2	3/4	1	1 1/4
Per dozen	\$5.00	6.00	7.20	9.60

POLISHED BLACK HARD RUBBER; Open Center; Made in One Piece.

No. 286—Angles 30, 60 and 90 Degrees.

Height, inches	4	6	8	10
Weight per dozen about, lbs.	1/4	3/8	1/2	1
Per dozen	\$6.00	8.40	12.00	15.60

No. 287—Angles 45, 45 and 90 Degrees.

Height, inches	4	6	8	10
Weight per dozen about, lbs.	3/8	1/2	3/4	1
Per dozen	\$8.40	10.80	16.80	24.00

IMPROVED XYLONITE (Transparent).

No. 1855—Angles 30, 60 and 90 Degrees.

Size, inches	4	5	6	7	8
Per dozen	\$3.00	4.20	4.80	5.40	6.60
Size, inches	9	10	11	12	
Per dozen	\$7.80	9.00	10.20	12.00	

No. 1856—Angles 45, 45 and 90 Degrees.

Size, inches	4	5	6	7	8
Per dozen	\$4.20	5.40	6.00	7.80	9.00
Size, inches	9	10	11	12	
Per dozen	\$11.40	13.20	16.20	19.80	

Packed Loose; These Triangles are Very Light and can be sent by mail.

IRREGULAR CURVES.



Cuts 1/7 Actual Size.

HARDWOOD.

No.	Per Dozen
8821A	\$ 2.25
8821B	3.00
8821C	3.40
8821D	3.40
8821E	3.40
8821F	3.00
8821G	3.40
8821H	2.25
8821I	3.40
8821K	3.75
8821L	2.00
8821M	4.90

XYLONITE (Transparent).

No.	Per Dozen
8823A	\$ 4.50
8823B	6.00
8823C	6.75
8823D	6.75
8823E	6.75
8823F	6.00
8823G	6.75
8823H	4.50
8823I	6.75
8823K	7.50
8823L	4.10
8823M	9.75

Packed Loose; These Goods are Very Light and can be sent by mail.

T SQUARES.



POLISHED PEAR-WOOD; Heads secured with Four Brass Screws and Glued.

FIXED HEAD.

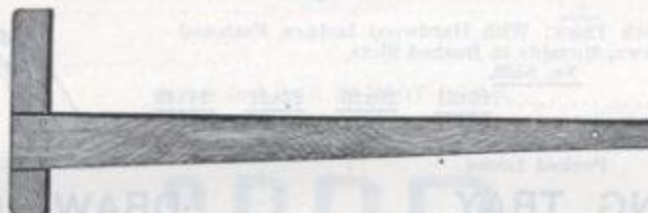
No. 1P.

Length of Blade, inches.....	24	30	36
Length of Head, inches.....	9	10	11
Weight per dozen about, lbs.....	3	3½	6
Per dozen	\$10.80	12.50	15.60

FIXED HEAD on One Side, Swivel Head on Other Side.

No. 2P.

Length of Blade, inches.....	24	30	36
Length of Head, inches.....	9	10	11
Weight per dozen about, lbs.....	5	6	7
Per dozen	\$21.00	27.00	30.00



Mahogany Head and Blade, Edges Ebony Lined; Beveled Edge; Fixed Head; Blade Tapered to Prevent Spring. Drawing Edge is in Line with Middle of Head.

No. 2400.

Length, inches	30	36	42	48	54
Weight per dozen about, lbs.....	4	5	6	7½	12
Per dozen	\$14.40	16.80	19.20	22.20	27.00

Packed Loose.

PROTRACTORS.



BRASS, Finely Polished; Figures and Lines Stamped; Half Circle; Used for Finding Angles.

No. 238—LENGTH 4 INCHES; Graduated in Degrees	Per Dozen \$ 6.00
No. 239—LENGTH 5 INCHES; Graduated in Degrees and Half Degrees.....	12.00
No. 240—LENGTH 6¼ INCHES; Graduated in Degrees and Half Degrees.....	15.00
Weight per Dozen about ½ lb.	

TRIANGULAR SCALES.



Length 12 inches; Divided to Scales of $\frac{3}{32}$, $\frac{3}{16}$, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, 1½ and 3 inches to the foot and inches and 16ths; Width $\frac{3}{4}$ inch.

No. 64M—POLISHED ROLLED STEEL; Weight per dozen about 2 lbs.....	Per Dozen \$30.00
No. 64—BOXWOOD; Selected and Polished Boxwood; Weight per dozen about 1 lb.....	12.00

Packed Loose.



ERASING SHIELDS.



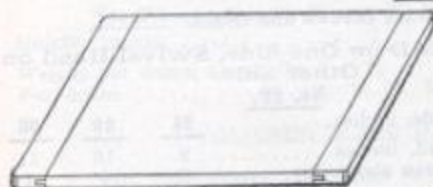
Very Thin Steel, Nickel Plated.

No. 3411M—Size $2\frac{1}{2} \times 3\frac{3}{4}$ inches

Packed Loose; Weight Light and can be sent by Mail.

Per Dozen
\$3.00

DRAWING BOARDS.



Whitewood; About $\frac{3}{4}$ inches Thick; End Cleats Tongued and Grooved; Both Sides Flat.

No. 8500.

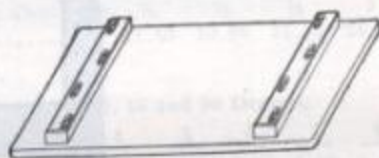
Size, inches	12x17	16x21	18x23	20x26	23x31
Weight per dozen about, lbs.	22	52	62	80	96
Per dozen	\$6.40	9.30	12.40	15.50	20.00

Pine Wood; About $\frac{3}{4}$ inch Thick; With Hardwood Ledges, Fastened by Screws, Movable in Bushed Slots.

No. 8520.

Size, inches	16x21	20x26	23x31	31x42
Weight per dozen about, lbs.	5	7	9 $\frac{1}{2}$	18 $\frac{1}{2}$
Per dozen	\$15.00	19.80	33.40	54.00

Packed Loose.



WHITLING TRAY.



For Elementary Work.

Made of Seasoned Poplar, Planed and Smoothed; $\frac{3}{4}$ inch board; Dove-tailed Frame, Reinforced; Size $14\frac{1}{2}$ by 20 inches; Complete with One Sloyd Knife, One Try Square, One 12 inch Rule, One Triangle, One Pencil Compass, One "T" Square and One Eraser.

Per Dozen

No. 4—Complete, as Described Above; Weight per dozen about 60 lbs. \$36.00

Packed Loose.

DRAWING KITS.



Made of Kiln Dried Maple; Each Kit Consists of 1 Drawing Board, 1 "T" Square and 2 Triangles.

Nos.	1	2	3
Size, inches	10x12	13x19	17x22
Weight each about, lbs.	1	1 $\frac{1}{2}$	2
Each	\$0.75	1.25	2.25

Packed Loose.

THUMB TACKS.

Solid Steel Head; Extra Quality Steel Points.

Per Gross

No. 10—Diameter of Head $\frac{3}{8}$ inch; Length of Point $\frac{1}{4}$ inch; Weight per gross about $\frac{1}{2}$ lbs. \$1.20
No. 12—Diameter of Head $\frac{1}{2}$ inch; Length of Point $\frac{3}{16}$ inch; Weight per gross about 10 ounces 1.50
Solid Steel Head, Enamelled Red, White and Blue; Extra Quality Steel Points.

Per Gross

No. 24—ASSORTED COLORS, Red, White and Blue; Diameter of Head $\frac{3}{8}$ inch; Length of Point $\frac{3}{16}$ inch; Weight per gross about $\frac{1}{2}$ lb. \$4.00

One Dozen on a Wood Block; Twelve Blocks (One Gross Tacks) in a Cardboard Box.

Solid Brass Head, Extra Quality Steel Points.

Per Gross

No. 13—Diameter of Head $\frac{3}{8}$ inch; Length of Point $\frac{1}{4}$ inch; Weight per gross about $\frac{1}{2}$ lb. \$2.00
No. 14—Diameter of Head $\frac{1}{2}$ inch; Length of Point $\frac{3}{16}$ inch; Weight per gross about 10 ounces 2.25
No. 15—Diameter of Head $\frac{3}{8}$ inch; Length of Point $\frac{3}{16}$ inch; Weight per gross about $\frac{1}{2}$ lb. 2.50

VENETIAN IRON AND BINDERS.

VENETIAN IRON.



Venetian Iron in Coils.

Low Carbon Annealed Flat Steel Wire, Natural Finish; Very Pliable; $\frac{3}{64}$ inch Thick; 50 feet in a Coil.

Width, inches	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$
Weight per coil, ozs.	10	13	19	32
Per pound	\$0.12 $\frac{1}{2}$	.12	.12	.12

SOLD ONLY IN 50 FOOT COILS.

BINDERS.



$\frac{1}{8}$ in. $\frac{3}{16}$ in. $\frac{1}{4}$ in. $\frac{3}{8}$ in.

Cuts full size.

Low Carbon Annealed Flat Steel Wire, Natural Finish; Very Pliable; $\frac{1}{32}$ inch Thick.

Size of opening, inches	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$
Weight per 100, ozs.	$\frac{2}{3}$	$\frac{4}{3}$	1	$1\frac{2}{3}$
Per hundred	\$0.10	.10	.10	.10

100 in an Envelope.



Cuts show Illustrations of Venetian Iron and Binders.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

PLIERS.

KEEN KUTTER*

Forged from Highest Grade Crucible Steel, Oil Tempered; Heavy Rivet at Joint.



No. 089F—Flat Nose.

Polished Jaws; Natural Finish Handles.			
Length, inches	3	4	5
Weight per dozen about, lbs.	¾	1½	3
Per dozen	\$3.20	3.20	3.60
Length, inches	6	7	8
Weight per dozen about, lbs.	4	7	10
Per dozen	\$5.00	6.40	7.75



No. 890R—Round Nose.

Natural Finish Handles and Jaws.			
Length, inches	3	4	5
Weight per dozen about, lbs.	¾	1½	3
Per dozen	\$3.20	3.20	3.60
Length, inches	6	7	8
Weight per dozen about, lbs.	4	7	8½
Per dozen	\$5.00	6.40	7.75

One-half Dozen in a Wood Box.



KEEN KUTTER*

Forged from Highest Grade Crucible Steel, Oil Tempered; Heavy Rivet at Joint; Polished and Scored Jaws; Natural Finish Handles; BOX JOINT.

No. 950—Raised Side Cutting.

Length, inches	5	6	7	8
Weight per dozen about, lbs. 2½	5	8	11	
Per dozen	\$12.00	15.00	17.00	20.00

No. 1950—Raised Side Cutting, with Insulated Handles.

Length, inches	6	7	8
Weight per dozen about, lbs.	6	9	12
Per dozen	\$24.00	30.00	36.00

The insulation on these Pliers is tested to insulate against a current of 2,500 volts. The insulation covering is not brittle and will not flake off.

One-half Dozen in a Wood Box.



KEEN KUTTER* Milliners'.

No. KK51—Forged from Crucible Steel, Nickel Plated and Polished; Jaws Tempered; Face of Jaws Scored; Long Nose, with Side Cutter; Lap Joint with Steel Rivet; Length over all 5¼ inches; Weight per dozen about 2¼ lbs.	
	Per Dozen
	\$12.00



KEEN KUTTER* Klein Pattern Lineman's.

Forged from Crucible Steel, Tempered; Polished Jaws; Gun Metal Finish Handles; Heavy Rivet at Joint; Raised Side Cutter; Face of Jaws Milled.

No. 960—KEEN KUTTER*.

Length, inches	6	7	8
Weight per dozen about, lbs.	5½	8½	12
Per dozen	\$13.50	17.00	20.00

One-half Dozen in a Cardboard Box.



Electricians'.

Forged from Tool Steel; Nickel Plated Jaws; Lap Joint; Face of Jaws Scored; Raised Side Cutting.

No. 59—Length 7 inches; Heavy Insulated Handles, Flaring at Jaws to Prevent Hand from Coming in Contact with Steel; Weight per dozen about 8¼ lbs.	
	Per Dozen
	\$24.00



No. 590—Heavy Insulated Handles.

Length, inches	7	8
Weight per dozen about, lbs.	9	12
Per dozen	\$18.00	20.00

One-twelfth Dozen in a Cardboard Box.

PLIERS.



STANDARD.

Forged from Tool Steel, Oil Tempered; Heavy Rivet at Joint; Polished Jaws; Natural Finish Handles; Lap Joint.

Diagonal Cutting.

No.	341
Length, inches	5
Weight per dozen about, lbs.	3½
Per dozen	\$13.00

One-half Dozen in a Cardboard Box.



STANDARD.

Forged from Tool Steel, Oil Tempered; Heavy Rivet at Joint; Polished and Scored Jaws; Natural Finish Handles; Lap Joint; Adapted especially for Electricians, Machinists, Jewelers and Opticians.

Long Nose, Side Cutting.

No.	654
Length, inches	5½
Length of Jaws, inches	1¾
Weight per dozen about, lbs.	2½
Per dozen	\$15.00

BERNARD'S.

Jaws Forged from Tool Steel, Tempered; Handles Stamped from Heavy Sheet Steel; Steel Rivets at Joint; Jaws Parallel at all times; Open Throat which allows a wire to pass entirely through, as shown in cut; Knurled Grips; Full Nickel Plated; Face of Jaws Scored.



BERNARD'S.

No. 145BR—Round Nose.

Length, inches	4½	5½
Weight per dozen about, lbs.	3	4
Per dozen	\$6.00	8.00



BERNARD'S.

No. 45BF—Flat Nose.

Length, inches	4½	5½	6½
Weight per dozen about, lbs.	3	4½	6
Per dozen	\$6.00	8.00	10.00



BERNARD'S.

No. 245BC—Flat Nose Cutting.

Length, inches	4½	5½	6½	7½
Weight per dozen about, lbs.	3	4½	6	(Extra Heavy) 12
Per dozen	\$11.50	14.50	17.50	23.50

One-half Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

MT



PLIERS AND WIRE CUTTERS COMBINED.



Sectional Cut Showing Patent Mechanical Stopping Device.

KEEN KUTTER®—BALL BEARING.

Forged from Highest Grade Crucible Steel, Oil Tempered; Ends of Handles Blued Finish; Flat Nose; Heavy Headed Steel Rivet at Joint; Face of Jaws Scored to Prevent Slipping; Patent Mechanical Device which Stops the Plier in opening when the Cutter Openings are in Proper Position to receive Wire for Cutting.

Full Polished.

Nos.	204½	206	208	210
Length, inches	4½	6	8	10
Weight per dozen about, lbs.	2½	4	8	10
Per dozen	\$10.00	12.00	15.00	20.00

Full Nickel Plated.

Nos.	304½	306	308
Length, inches	4½	6	8
Weight per dozen about, lbs.	2½	4	8
Per dozen	\$12.00	15.00	18.00

One-half Dozen in a Cardboard Box.

Forged from Highest Grade
Crucible Steel, Oil Tempered;
Wire Cutter on Side.



Adjustable Joint for hold-
ing large or small Pipe; Face
of Jaws Scored; Milled Teeth.

KEEN KUTTER®

Combination Gas and Flat Nose Plier, Wire Cutter, Pipe Wrench and Screw Driver.

	Per Dozen
No. 160—Nickel Plated; Length 6 inches; Holds Pipe 3/16 to 1/4 inch; Weight per dozen about 6 lbs.	\$15.00
No. 260—Oil Finish; Length 6 inches; Holds Pipe 3/16 to 1/4 inch; Weight per dozen about 6 lbs.	13.50
No. 290—Oil Finish; Length 10 inches; Holds Pipe 1/4 to 1 1/4 inches; Weight per dozen about 12 lbs.	18.00

One-twelfth Dozen in a Cardboard Box.



Combined Flat Nose Gas Plier and Wire Cutter;
Cast Steel, Hardened and Polished; Lap Joint; Face of
Jaws Scored; Milled Teeth; Holds Gas Pipe 1/2 inch
and smaller.

No.	75
Length, inches	5½
Weight per dozen about, lbs.	3
Per dozen	\$4.25



Combination Raised Side Wire Cutter, Gas Plier
and Screw Driver; Cast Steel, Tempered and Full Pol-
ished; Lap Joint; Face of Jaws Scored; Milled Teeth;
Holds Gas Pipe 1/2 inch and Smaller.

No.	27
Length, inches	6
Weight per dozen about, lbs.	3½
Per dozen	\$10.00

GAS PLIERS.



KEEN KUTTER®



Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Jaws; Gun Metal Finish Handles;
Heavy Rivet at Joint; Milled Teeth.

Single Jaws.

Nos.	905	906
Length, inches	5	6
Weight per dozen about, lbs.	3	5
Per dozen	\$6.50	8.50

No. 905—Holds Gas Pipe 1/2 inch and smaller.

No. 906—Holds Gas Pipe 3/4 inch and smaller.

Double Jaws.

Nos.	908	910	912
Length, inches	8	10	12
Weight per dozen about, lbs.	7	11	16
Per dozen	\$9.00	12.00	15.00

No. 908—Holds Gas Pipe 1 inch and smaller.

No. 910—Holds Gas Pipe 1 1/4 to 1 1/2 inch.

No. 912—Holds Gas Pipe 1 3/4 to 2 inch.

One-half Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

CUTTING NIPPERS.



KEEN KUTTER*

High Grade Crucible Tool Steel Jaws, Polished and Tempered; Malleable Iron Handles and Head, Dead Black Finish; Box Joint; Set Screw between Handles. Jaws are Reversible and Interchangeable. Each Jaw has Two Cutting Edges and is held in place by Two Screws.

Nos.	K 6	K 8	K 10	K 12
Length, inches	6	8	10	12
Weight per dozen about, lbs.	9	18	24	30
Per dozen	\$18.00	21.00	24.00	27.00

One-twelfth Dozen in a Cardboard Box.

EXTRA CUTTERS.

FOR KEEN KUTTER* CUTTING NIPPERS.

With Screws.

Nos.	KC6	KC8	KC10	KC12
Weight per dozen pairs about, lbs.	1½	2¼	3	4
Per dozen pairs	\$6.00	7.20	9.60	10.80

FOR MUSIC WIRE.

Nos.	KCM6	KCM8	KCM10	KCM12
Weight per dozen pairs about, lbs.	1½	2¼	3	4
Per dozen pairs	\$7.80	9.00	11.40	12.60

Packed Loose.

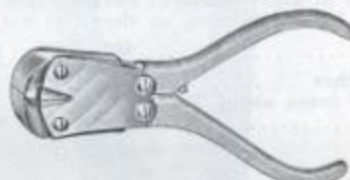


HERCULES.

Jaws Forged from Tool Steel, Tempered; Handles Stamped from Heavy Sheet Steel; Polished; Steel Coil Spring; Heavy Steel Rivets at Joints; Compound Leverage.

No.	155
Length, inches	5½
Weight per dozen about, lbs.	4½
Per Dozen	\$9.00

One-half Dozen in a Cardboard Box.



HALL'S.

Forged from Tool Steel; Tempered and Polished Jaws; Natural Finish Handles; Heavy Steel Screws at Joints; Compound Leverage.

Nos.	2 H	4 H	6 H
Length, inches	5	7	8
Weight per dozen about, lbs.	7	10	14
Per dozen	\$13.50	21.00	24.00

TODD'S.

Handles and Head Forged from Tool Steel; Detachable Cutting Jaws attached to Head with Four Heavy Steel Screws; Cutting Jaws Forged from Special Tool Steel, Tempered and Polished; Natural Finish Handles and Head.



With Steel Set Screw in Handle.

Nos.	4 T	3 T	1 T
Length, inches	8	10	12
Weight each about, lbs.	1	1½	2
Each	\$1.50	1.75	2.25

EXTRA CUTTERS.

For Todd's Cutting Nippers.

Nos.	C4T	C3T	C1T
Weight per pair about, ozs.	2	3	4
Per pair	\$0.35	.40	.40

One in a Package; Extra Cutters Packed Loose.



Without Set Screws.

Nos.	5 T
Length, inches	5
Weight each about, lb.	¾
Each	\$1.25

EXTRA CUTTERS.

For Todd's Cutting Nippers.

Nos.	C5T
Weight per pair about, ozs.	2
Per pair	\$0.35

TRADE MARK:
A. C. SIMMONS' KEEN KUTTER;
REGISTERED.

CUTTING NIPPERS.



No. 61—STANDARD.

Cast Steel, Tempered and Polished Jaws; Natural Finish Handles.

	5	6	8
Length, inches	3 1/2	4 1/2	7
Weight per dozen about, lbs.....	\$6.25	7.75	13.50
Per dozen			

One Dozen in a Cardboard Box.

PINCERS.



KEEN KUTTER®—Carpenters'.

Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Jaws and Head; Natural Finish Handles; Polished Claw and Screw Driver; Heavy Steel Rivet at Joint; Reinforced Double Bevel Cutting Edge; No. 806 has Straight Handles; Larger Sizes have Claw and Screw Driver Handles, as shown in cut.

	806	808	810	812
Nos.	6	8	10	12
Length, inches	5	10	14	16
Weight per dozen about, lbs...	\$4.20	6.00	9.00	12.00
Per dozen				



KEEN KUTTER®—Blacksmith's Shoeing.

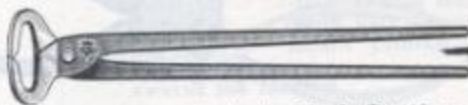
Forged from Highest Grade Crucible Steel; Oil Tempered and Polished Jaws; Gun Metal Finish Parallel Handles; Extra Heavy Steel Rivet at Joint; CLOSE BITING JAWS.

	110	112	114
Nos.	10	12	14
Length, inches	16	18	24
Weight per dozen about, lbs.....	\$13.00	15.00	18.00
Per dozen			



KEEN KUTTER®—Shoeing and Cutting.

	Per Dozen
No. 914—KEEN KUTTER®; Forged from Highest Grade Crucible Steel; Oil Tempered and Polished Jaws; Gun Metal Finish Parallel Handles; Extra Heavy Steel Rivet at Joint; CLOSE BITING JAWS; Length 14 inches; Weight per dozen about 30 lbs.....	\$26.00



KEEN KUTTER®—Carrier's Nail Cutting.

Forged from Highest Grade Crucible Steel; Oil Tempered and Polished Jaws; Gun Metal Finish Parallel Handles; Extra Heavy Steel Rivet at Joint; CLOSE BITING JAWS.

	1212	1214
Nos.	12	14
Length, inches	22	26
Weight per dozen about, lbs.....	\$21.00	24.00
Per dozen		

One-half Dozen in a Cardboard Box.



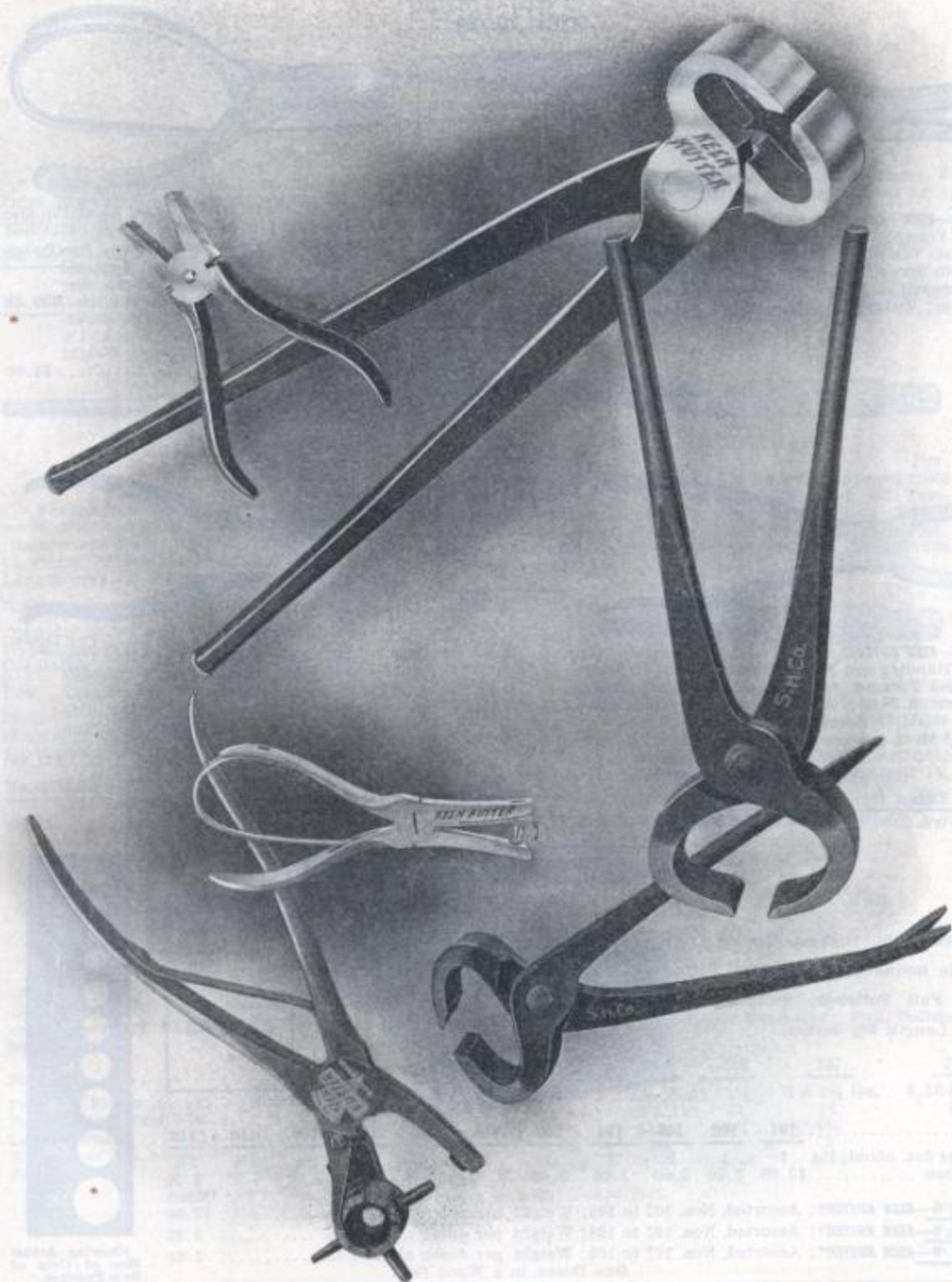
KEEN KUTTER®—Hoof Paring.

Forged from Highest Grade Crucible Steel; Oil Tempered and Polished Jaws; Gun Metal Finish Parallel Handles; Cutting Edges Finely Ground and Perfectly Fitted; Extra Heavy Rivet at Joint.

	012	014
Nos.	12	14
Length, inches	22	24
Weight per dozen about, lbs.....	\$24.00	28.80
Per dozen		

THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN. - E. C. SIMMONS

TRADE MARK REGISTERED



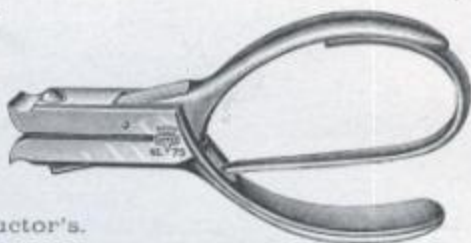
TRADE MARK
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

PUNCHES.

KEEN KUTTER®



Highest Grade Goods
made with Steel Dies
and Plungers, Fitted
with Extreme Care.



Ticket and Conductor's.

No. 50—KEEN KUTTER®; Nickel Plated Cast Steel Frame; Steel Joint-Screw and Plunger; Flat Tempered Steel Main Spring, attached with Screw; Length of Reach $\frac{3}{4}$ inch; Length over all 5 inches; Assorted Fancy Pattern Dies; Weight per dozen about 3 lbs. \$15.00

Per Dozen

Nickel Plated Cast Steel Frame; Steel Joint-Pin and Plunger; Flat Tempered Steel Main Spring, attached with Screw; Assorted Fancy Pattern Dies. Per Dozen

No. 65—KEEN KUTTER®; Tempered Steel Inserted Die; Length of Reach 1 inch; Length over all $\frac{4}{8}$ inches; Weight per dozen about 3 lbs. \$29.00

No. 75—KEEN KUTTER®; Tempered Steel Die, Dove-tailed in Frame; Length of Reach $1\frac{1}{4}$ inches; Length over all $\frac{4}{8}$ inches; Weight per dozen about $3\frac{1}{4}$ lbs. 36.00

One-half Dozen in a Cardboard Box.



Extra Heavy
Frames; Care-
fully Tempered
Steel Springs;
Selected and
Tested Tubes.



Nos. 4 6 8 10
Cut Showing Sizes
of Punch Tubes
for Punches.

Spring, Single Tube. Per Dozen

No. 42—KEEN KUTTER®; Full Polished Malleable Iron Handles and Jaws; Highest Grade Crucible Steel Swaged and Tempered Tube; Heavy Rivet at Joint; Tempered Steel Spring Riveted to Handle; Assorted Size Tubes, Nos. 4, 6, 8 and 10 in a dozen; Weight per dozen about 10 lbs. \$8.00

One-half Dozen in a Wood Box.

Extra Tubes for No. 42 Punches, 3 Dozen Assorted, Nos. 4, 6, 8 and 10 in a Cardboard Box. \$3.00

Revolving, 4 Tube. Per Dozen

No. 14—KEEN KUTTER®; Full Polished Malleable Iron Handles and Jaws; Highest Grade Crucible Steel, Swaged and Tempered Tubes; Heavy Rivet at Joint; Tempered Steel Spring Riveted to Handle; Each Punch Fitted with one Tube each Nos. 4, 6, 8 and 10; Weight per dozen about 11 lbs. \$21.00

One-half Dozen in a Wood Box.

Extra Tubes for No. 14 Punches, 3 Dozen Assorted, Nos. 4, 6, 8 and 10 in a Cardboard Box. 3.00

Belt.

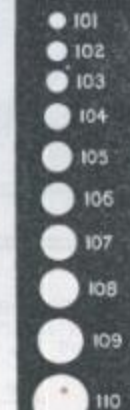
Forged from Highest Grade
Crucible Round Steel, Oil Tem-
pered, Full Polished; Swaged
Point; Length $3\frac{3}{4}$ inches.



Best Made
Points; Man-
drel Drawn;
Beveled from
Outside; Nev-
er Clog.

Nos.	101	102	103	104	105	106	107	108	109	110	112
Wgt. per doz. about, lbs.	1	1	1	1	1	1	1 1/4	1 1/4	1 1/4	1 1/2	2 1/4
Per dozen	\$3.00	3.00	3.00	3.00	3.00	3.00	3.60	3.60	3.60	4.50	5.50

No. 102/6—KEEN KUTTER®; Assorted, Nos. 102 to 106; Weight per dozen about 1 lb. \$3.00
No. 105/8—KEEN KUTTER®; Assorted, Nos. 105 to 108; Weight per dozen about 1 lb. 3.25
No. 107/9—KEEN KUTTER®; Assorted, Nos. 107 to 109; Weight per dozen about 1 lb. 3.60
One Dozen in a Wood Box.



Showing Actual
Size of Cuts of
Belt Punches.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

PUNCHES.



SOLID MACHINE.

KEEN KUTTER BLACK JACK*.

Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Point; Natural Finish Octagon Barrel; Point Tapers from Barrel to within $1\frac{1}{4}$ inches of End; Balance of Point Straight. Especially adapted for driving Rivets out of Machinery.

	Per Dozen
No. 358—Length 9 inches; Diameter of Shank $\frac{5}{8}$ inch; Diameter at Point $\frac{3}{16}$ inch; Weight per dozen about 9½ lbs.	\$6.00
No. 301—Length 10 inches; Diameter of Shank $\frac{3}{4}$ inch; Diameter at Point $\frac{1}{4}$ inch; Weight per dozen about 14 lbs.	8.00

One-half Dozen in a Cardboard Box.



SOLID MACHINE.

KEEN KUTTER*.

Forged from Highest Grade Crucible Steel; Oil Tempered; Polished Point; Natural Finish, Octagon Barrel; Diameter of Shank $\frac{1}{2}$ inch; Point Tapers from Barrel to within $\frac{3}{4}$ inch of End; Balance of Point Straight; Length over all 6 inches.

Nos.	K11	K12	K13
Diameter at point, inches	$\frac{5}{32}$	$\frac{7}{32}$	$\frac{6}{32}$
Weight per dozen about, lbs.	3½	3¾	3¾
Per dozen	\$3.25	3.25	3.25
Nos.	K14	K15	K16
Diameter at point, inches	$\frac{5}{32}$	$\frac{4}{32}$	$\frac{3}{32}$
Weight per dozen about, lbs.	3¾	3¼	3¼
Per dozen	\$3.25	3.25	3.25
No. K13/16—ASSORTED; $\frac{1}{4}$ dozen of each Nos. K13, K14, K15 and K16.	\$3.25		

One Dozen in a Cardboard Box.



CENTER.

	Per Dozen
No. 215—KEEN KUTTER BLUE BRAND*; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Head and Point; Round Knurled Barrel; Blue Finish Throughout; Length $3\frac{1}{2}$ inches; Weight per dozen about 1¼ lbs.	\$2.50



PRICK..

	Per Dozen
No. 217—KEEN KUTTER BLUE BRAND*; Forged from Highest Grade Crucible Steel, Oil Tempered; Polished Head and Point; Round Knurled Barrel; Blue Finish Throughout; Length 4 inches; Weight per dozen about 1¼ lbs.	\$2.50

One Dozen in a Wood Box.

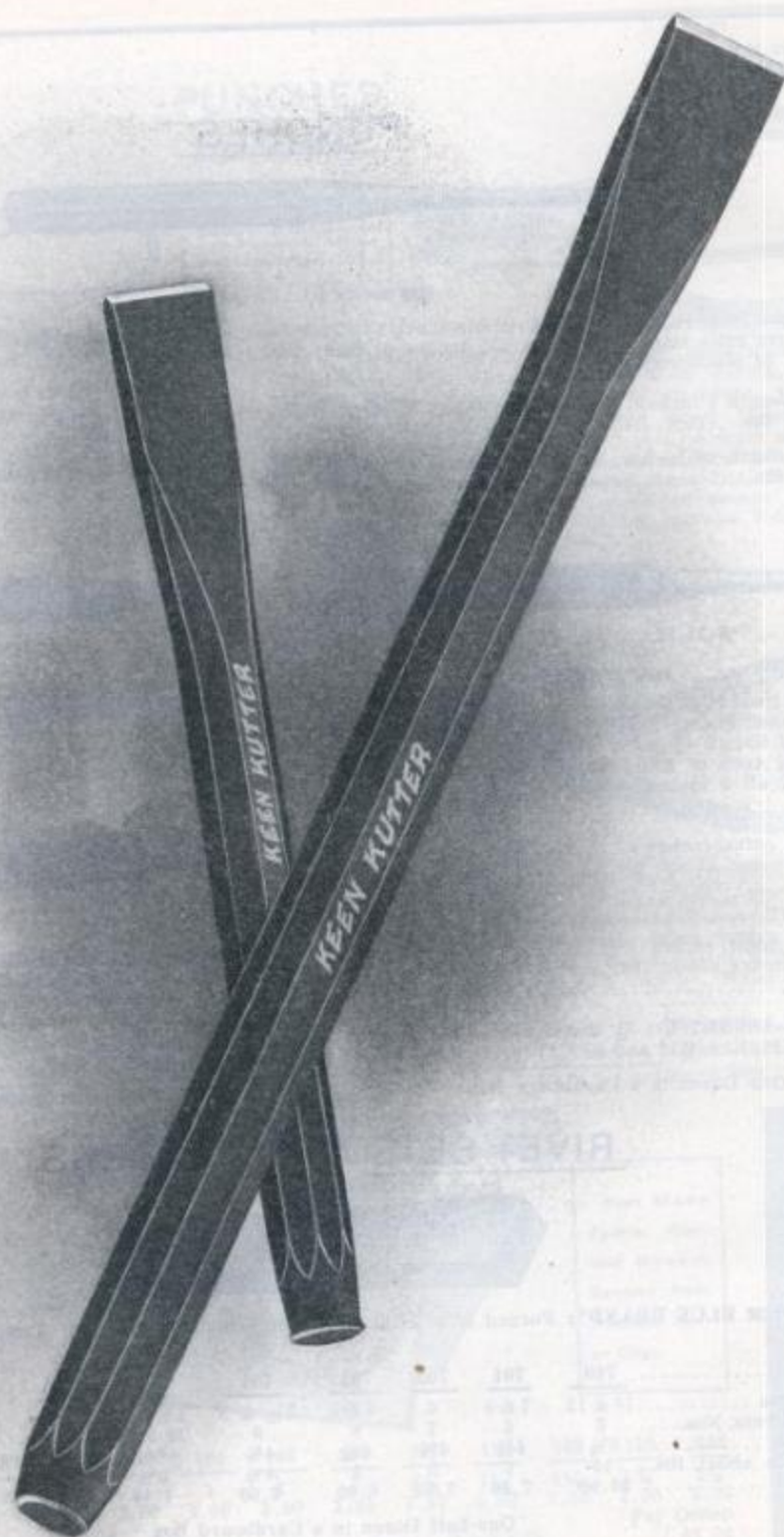
RIVET SETS AND HEADERS.



KEEN KUTTER BLUE BRAND*; Forged from Highest Grade Crucible Steel, Oil Tempered; Full Polished and Blue Finish.

Nos.	700	701	702	703	704	705	706	707	708
For Iron Rivets	10 & 12	7 & 8	6	4 & 5	2½ & 3	1¼ & 2	1½	1 & 1¼ lbs.	8, 10 & 12 oz.
For Copper Rivets, Nos.	5	6	7	8	9	10 & 11	12	13	14
Length, inches	5½	4¾	4½	4½	4¾	4½/16	4¾	4¾	4
Weight per doz, about, lbs.	10	7	5	5	4½	3½	3	3	3
Per dozen	\$9.00	7.56	7.56	6.00	6.00	4.44	4.44	3.84	3.84

One-half Dozen in a Cardboard Box.



"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SINNONS
TRADE MARK REGISTERED.

TRADE MARK
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

NAIL SETS.



No. 200 Assorted.

No. 200—Assorted Sizes, $\frac{1}{32}$, $\frac{2}{32}$, $\frac{3}{32}$, $\frac{4}{32}$ inch. Per Dozen \$2.50

One Dozen in a Display Box.

No. 200—STRAIGHT SIZES.

Size of Points, inch	$\frac{1}{32}$	$\frac{2}{32}$	$\frac{3}{32}$	$\frac{4}{32}$
Per dozen	\$2.50	2.50	2.50	2.50

One Dozen in a Wood Box; Weight per Dozen about $1\frac{1}{4}$ lbs.

KEEN KUTTER
Highest Grade Crucible Steel.
Beautiful in Finish.

Forged from Highest Grade Crucible Steel, Cup Point Oil Tempered; Polished Head and Point; Round Knurled Barrel $\frac{5}{16}$ inch in Diameter, Length 4 inches.

MAGNETS.



Horse Shoe Pattern, Steel; Body Painted Red; Ends and Block Polished.

Length, inches	2	3	3½	4
Weight per dozen about, lbs.	¾	1½	2¼	3½
Quantity in package, dozen	6	4	3	2
Per dozen	\$1.25	1.90	2.75	3.50
Length, inches	5	6	8	10
Weight per dozen about, lbs.	6¼	10¼	24½	40
Quantity in package, dozen	1	1	½	½
Per dozen	\$5.60	8.00	16.50	28.00

COLD CHISELS.



KEEN KUTTER®—MACHINIST'S.

No necessity for the Blacksmith to make his own Cold Chisels.

KEEN KUTTER Chisels do the work.

Forged from Highest Grade Octagon Crucible Steel, Oil Tempered; Polished Bevel and Head; Natural Finish Body.

Nos.	34	78
Width of Cut, inches	¾	¾
Diameter of Steel, inches	¾	¾
Length, inches	10	10
Weight per dozen about, lbs.	10½	15
Per dozen	\$7.00	9.50

One-half Dozen in a Cardboard Box.

Made of a Special Quality of Tool Steel.
Cutting Edges are Carefully Ground.



KEEN KUTTER®—REGULAR.

Forged from Highest Grade Octagon Crucible Steel, Oil Tempered; Polished Bevel and Head; Natural Finish Body.

Width of Cut, inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
Diameter of Steel, inches	$\frac{5}{16}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$
Length, inches	$5\frac{1}{2}$	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	$7\frac{1}{2}$
Weight per dozen about, lbs.	1¾	3½	4½	7½	11	15
Per dozen	\$1.75	2.50	3.50	5.00	7.00	9.00

$\frac{3}{8}$ Inch, One Dozen; Other Sizes One-half Dozen in a Cardboard Box.

CAPE CHISELS.

STANDARD—CAPE.

Forged from Octagon Tool Steel, Tempered; Natural Finish.



Width of Cut, inches	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$
Diameter of Steel, inches	¾	¾	¾	¾	¾
Length, inches	6½	6½	6½	6½	6½
Weight per doz. about, lbs.	4¾	4¾	7	9	11½
Per dozen	\$1.75	2.00	2.85	3.75	4.50

One-half Dozen in a Cardboard Box.



SAW SWAGES.



DISSTON'S.

Forged Steel Body; Polished Edges; Hardened Face, with Inserted Crucible Steel Hardened Jaws; Blued Steel Cap; Slot in Gullet prevents blunting or injuring Fine Cutting Edge of Tooth.

Nos.	D0	D1	D2	D3
Length over all, inches.....	5 3/4	5	3 3/4	2 3/4
Weight each about, lbs.....	1 3/4	1 1/4	3/4	1/4
Each	\$3.00	2.75	2.25	1.75

The No. D0 has Protecting Tongue for use when a Spread Set is desired; No. D1 adapted for large Circular Saws; No. D2 for small Circular and Mill Saws; No. D3 for small Circular and Narrow Band Saws.

One in a Cardboard Box.



MIXTER'S; CHAMPION.

Automatic; Self-Feeding; Japanned Finish; Malleable Iron Plate and Carriage, and Cranks 9 1/2 inches Long, with Hardwood Handle; Steel Driving Shaft with Ratchet; Sliding Brass Gauge; Steel Feed Screw, with Malleable Iron Head; Two Japanned Malleable Iron Clamps; Complete with Adjusting Screws; Japanned Malleable Iron T-Head Wrench, 7 1/4 inches Long; Adjustable Cutter Grinder for Holding Cutters when Sharpening.

No. 1L—MIXTER'S, CHAMPION, LARGE; Shaft 10 3/4 inches Long, with 1/2 inch Arbor; Length over all 11 1/4 inches; Complete with Two Cranks and Hardened Steel Gummer Cutters, One each 1 1/2 and 3/4 inch Outside Diameter; Weight each complete about 27 1/2 lbs. \$30.00

NOTE—No. 1L is adapted for Circular Saws, 40 inch Diameter and Larger; Full Directions for use accompany each Gummer.

SAW GUMMERS.

GUMMER CUTTERS.



Crucible Tool Steel; Natural Finish; Carefully Milled and Hardened.

No. B—STANDARD.

For Mixer's and Standard Saw Gummings.

Diameter, inches	1/2	5/8	3/4	7/8	1
Thickness, inches	15/16	15/16	15/16	15/16	15/16
Size of Arbor Hole, in.....	5/16	5/16	1/2	1/2	3/4
Weight each, ounces	1	1	2	2	3
Each	\$0.50	.50	.60	.70	.80

One Dozen in a Cardboard Box.

No. C—GENUINE MIXTER'S.

For Mixer's Saw Gummings.

Diameter, inches	3/4	7/8	1
Thickness, inches	15/16	15/16	15/16
Size of Arbor Hole, in.....	1/2	1/2	3/4
Weight each, ounces	1	2	3
Each	\$0.60	.70	.80

Packed Loose.

No. B, 1/2 and 5/8 inch, are for STANDARD, Nos. B and C, 3/4 to 1 inch, are for STANDARD and No. 1L, Mixer's Gummings.



VICTOR.

Self-feeding and Adjustable; Japanned Finish; Cast Iron Plate; Malleable Iron Carriage, and Cranks 9 1/2 inches Long; Hardwood Handle; Steel Driving Shaft, with Ratchet; Sliding Brass Gauge; Steel Feed Screw, with Ratchet and Malleable Iron Wheel Head; Two Japanned Malleable Iron Clamps; Complete with Adjusting Screws; Japanned Malleable Iron T-Head Wrench, 5 1/2 inches Long; Adjustable Cutter Grinder for Holding Cutters when Sharpening.

No. 1—VICTOR, LARGE; Shaft 10 1/2 inches Long, with 5/16 inch Arbor; Length over all 13 inches; Complete with Hardened Steel Gummer Cutters, One each 1 1/2, 1 and 3/4 inch Outside Diameter; Weight each about 26 lbs. \$18.00

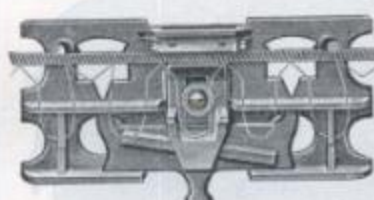
No. 2—VICTOR, SMALL; Shaft 9 1/4 inches Long, with 5/16 inch Arbor; Length over all 13 inches; Complete with Hardened Steel Gummer Cutters, One each 1 1/2, 1 and 3/4 inch Outside Diameter; Weight each about 25 lbs. 18.00

NOTE—No. 1 is adapted for Circular Saws 40 inches Diameter and Larger; No. 2 for Circular Saws, Smaller than 40 inches Diameter; Full Directions for use accompany each Gummer.

One in a Wood Box.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

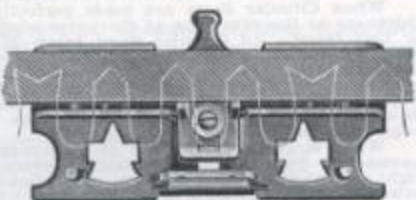
SAW TOOLS.



No. K as a Jointer.



No. K as a Raker-Tooth Gauge.



No. K as a Side File.



Setting Block.



Tooth Set Gauge.

KEEN KUTTER*

Select Hardened Iron, Nickel Plated Finish, Unpolished, with Accurately Ground Top Filing-Plate, Adjustable by a Screw; Double-acting Sliding Cam Device for Holding File; Can be locked in any Position by a Screw; Complete with No. AB Setting Block (see below) and Hardened Iron Tooth-Set Gauge $3\frac{1}{4} \times 1\frac{1}{2}$ inches.

No. K—KEEN KUTTER*: Frame $5\frac{1}{4}$ inches Wide, $2\frac{1}{4}$ inches High, with Three $\frac{1}{2}$ inch Flanges; Weight per dozen sets about 16 lbs. Per Dozen Sets \$12.00
One Set in a Cardboard Box; Twelve and One-half Dozen Sets in a Case.

No. AB—Setting Blocks (or Anvils); EXTRA HARDENED IRON, 7 inches Long, for Saw Tools Nos. K, A and C; Weight per dozen about 8 lbs. Per Dozen \$3.60

Packed Loose.

SAW TOOTH GAUGES.



No. ST.



No. DT.

ATKINS'.

Malleable Iron, Flanged; Plain Finish; Length over all $5\frac{1}{2}$ inches.

<p>No. S/T—SINGLE TOOTH, for Gauging Length of Raker Teeth; Weight per dozen about $2\frac{1}{2}$ lbs. Per Dozen \$0.80</p>	<p>No. DT—DOUBLE TOOTH, for Gauging Set of Teeth and Length of Raker Teeth; Weight per dozen about 3 lbs. Per Dozen \$1.20</p>
<p>One Dozen in Cardboard Box.</p>	

CIRCULAR SAWS.



HOW TO TELL THE DIFFERENCE BETWEEN RIGHT AND LEFT HAND CIRCULAR SAWS.

WHEN IN USE ON SAW MILL.

Standing in front of a Circular Saw, with the Saw revolving toward you, if the carriage upon which the log rests passes to the right of the Saw, it is a Right Hand Saw; if to the left, it is a Left Hand Saw.

WHEN NOT IN USE ON SAW MILL.

When Circular Saws are made perfectly flat on both sides, and the same thickness at the center as at the outer edge or periphery, they are either Right or Left Hand. All Circular Saws below 30 inches are made this way. However, when Saws above 30 inches are "bevel ground," that is, made thicker at the center than at the edge or periphery, they are made flat at the hand or log side, with all the bevel or fullness on the opposite or board side, and consequently are not reversible except by process of rehammering by a competent Saw Maker. They are usually one gauge thicker at the center than at the edge, but this is not invariable.

When large Saws are run at an unusually high speed, it is necessary to hammer or tension them to such an extent that they will dish either to the right or left; this extra tension is necessary because of the centrifugal force; otherwise, when the Saw is in rapid motion the outer edge would be so stretched that it would not cut correctly. Saws thus "dished" when in rapid motion, assume a straight position on both sides and saw correctly.

In order to determine the hand of a Saw, hold it up with the teeth toward you, and by the use of a straight edge the flat side can be determined; this is the log or hand side. Thus a Right Hand Saw will show flat under the straight edge on the Right Hand side and convex or full on the Left Hand side.

NOTICE.—Orders for Saws not of Standard Gauge or Hole, as described in list, or irregular in any particular, will be accepted only with the distinct understanding that they are subject to delay in making, and are not subject to cancellation under any circumstances. When ordering Special Circular Saws (marked thus $\frac{1}{2}$) be Particular to State the following Specifications: Diameter, Number of Teeth, Gauge at Center, Gauge at Rim, Right or Left Hand, Size of Mandrel Hole, Distance from Center to Center of Pin Holes, Highest Speed at which Saw is to Run, Kind of Lumber to be Sawn; State whether the Saw is to be used for Ripping or Cross-Cutting.

Crucible Steel, Patent Ground and Tempered; Solid Teeth; Polished.

DISSTON'S CROSS CUT; Diameter,

inches	6	7	8	10	12	14	16	18	20	22	24	26	28	30
Each	\$1.55	1.85	2.20	3.30	4.15	5.00	6.00	7.50	9.00	11.00	13.00	15.00	17.00	19.00

DISSTON'S CROSS CUT: All other sizes; See list below.

DISSTON'S RIP; Diameter, inches

	6	8	10	12	14	16
Each	\$1.55	2.20	3.30	4.15	5.00	6.00

DISSTON'S RIP: All other sizes; See list below.

ATKINS' CROSS CUT: All sizes; See list below.

ATKINS' RIP: All sizes; See list below.

CURTIS' CROSS CUT: All sizes; See list below.

CURTIS' RIP: All sizes; See list below.

Diameter, inches.	Thickness, gauge.	Size of Hole, inches.	Price, Each.	Extra for setting and sharpening Rip Saws.	Extra for setting and sharpening Cross-cut Saws.	Extra for additional gauge heavier.	Shipping Weight, each about	Diameter, inches.	Thickness, gauge.	Size of Hole, inches.	Price, each.	Extra for setting and sharpening Rip Saws.	Extra for setting and sharpening Cross-cut Saws.	Extra for additional gauge heavier.	Shipping Weight, each about
4	19	$\frac{3}{8}$	\$ 1.10	\$ 0.25	\$ 0.35	\$ 0.03	3 oz.	20	10	$\frac{13}{16}$	\$19.00	\$ 1.30	\$ 1.95	\$ 0.90	36 lbs.
5	19	$\frac{3}{8}$	1.30	.28	.40	.04	4 $\frac{1}{2}$ "	22	10	$\frac{13}{16}$	22.00	1.40	2.05	1.00	52 "
6	18	$\frac{3}{8}$	1.55	.30	.45	.05	5 $\frac{1}{2}$ "	24	9	$\frac{13}{16}$	25.00	1.60	2.35	1.20	61 "
7	18	$\frac{3}{8}$	1.85	.33	.50	.06	6 $\frac{1}{2}$ "	26	9	$\frac{13}{16}$	28.00	1.70	2.55	1.40	66 "
8	18	$\frac{3}{8}$	2.20	.35	.55	.08	8 "	28	9	$\frac{13}{16}$	31.00	1.85	2.75	1.75	70 "
9	17	$\frac{3}{8}$	2.75	.40	.60	.10	12 "	40	9	2	36.00	2.00	2.95	2.00	74 "
10	16	1	3.30	.45	.65	.12	1 $\frac{1}{2}$ lbs.	42	8	2	42.00	....	3.15	2.50	90 "
11	16	1	3.80	.48	.70	.14	1 $\frac{3}{4}$ "	44	8	2	50.00	....	3.35	3.00	97 "
12	15	1	4.15	.50	.75	.17	2 "	46	8	2	60.00	....	3.60	3.50	104 "
14	15	$\frac{13}{16}$	5.00	.60	.85	.21	3 "	48	8	2	70.00	....	3.80	4.00	112 "
16	14	$\frac{13}{16}$	6.00	.65	.95	.25	10 "	50	7	2	80.00	....	4.10	4.50	119 "
18	13	$\frac{13}{16}$	7.50	.70	1.05	.30	11 $\frac{1}{2}$ "	52	7	2	90.00	....	4.40	5.00	133 "
20	13	$\frac{13}{16}$	9.00	.80	1.15	.35	14 $\frac{1}{2}$ "	54	7	2	100.00	....	4.70	6.00	151 "
22	12	$\frac{13}{16}$	11.00	.90	1.30	.45	17 "	56	7	2	115.00	....	5.00	7.00	167 "
24	11	$\frac{13}{16}$	13.00	1.00	1.45	.55	20 $\frac{1}{2}$ "	58	7	2	130.00	....	5.30	8.00	180 "
26	11	$\frac{13}{16}$	15.00	1.10	1.60	.65	24 "	60	6	2	145.00	....	5.60	9.00	199 "
28	10	$\frac{13}{16}$	17.00	1.20	1.75	.80	31 "								

4 to 14 inch wrapped in paper. 15 to 60 inch cleated to a board.

NOTE.—Saws 40 inches and over are filed and Set or Swaged, ready for use, without extra charge.

No extra charge for Saws one gauge thicker than List.

Saws 42 inches and under, beveled one gauge without extra charge.

Saws 44 inches and over, beveled two gauges without extra charge.

Saws 48 inches and larger, if made thinner than 10 gauge, are not warranted, and 10% added for each gauge thinner than 10 gauge.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

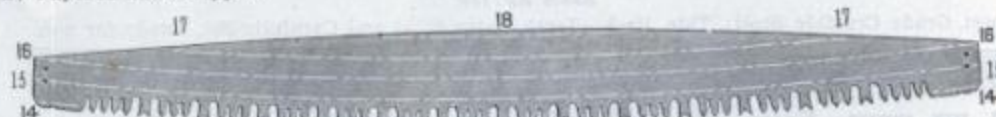
-270- CROSS CUT SAWS.

Without Handles.

If Handles are Wanted, Invariably Specify Separately for Them.

KEEN KUTTER®.

Highest Grade Crucible Steel, EXTRA POLISHED AND ETCHED; Ground Gradually Thinner from Teeth to Back, the Lines of Taper Curving Parallel to the Cutting Edge (see Cut), making a Thin Center Back (Lessening Friction), and Stiff Ends (Preventing Buckling); TEETH EXTRA FILED AND CAREFULLY SET, READY FOR USE; Papered and Stripped.



Showing Curve Grinding on KEEN KUTTER Saws.

Made by the World's Best Saw Makers
who put into them the Very Best Material
and Workmanship.

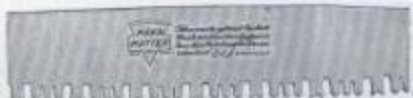
Tuttle Tooth, Wide Blade.

No. K100—KEEN KUTTER®; 14x18 Gauge.

Length, feet	5	5½	6	6½	7
Width at Center, inches..	7	7½	7¾	7¾	7¾
Weight each net about,					
lbs.	5	7	8	9	10
Each	\$3.00	3.30	3.60	3.96	4.20

No. K110—KEEN KUTTER®; 14x19 Gauge.

Length, feet	5	5½	6	6½	7
Width at Center, inches..	6¾	7¼	7½	7¾	8
Weight each net about,					
lbs.	5	7	8	9	10
Each	\$3.50	3.55	3.85	4.20	4.50



Tri-Cut Tooth (Dexter Pattern), Wide Blade.

No. K107—KEEN KUTTER®; 14x18 Gauge.

Length, feet	5½	6	6½	7
Width at Center,				
inches	7	7½	8	8
Weight each net				
about, lbs.	7	8	9	10
Each	\$4.10	4.50	4.90	5.25

No. K112—KEEN KUTTER®; 14x19 Gauge.

Length, feet	5½	6	6½	7	7½
Width at Center, inches..	6½	7	7¼	7¾	7¾
Weight each net about,					
lbs.	7	8	9	10	12
Each	\$4.35	4.75	5.15	5.50	5.90

Each Saw Wrapped in Paper; Teeth Protected by Wood Strip.

For Shipment, One to Six Wide Blade Saws as Ordered, are Wired to a Board Weighing about 7 lbs.

Plain or Peg Tooth, Wide Blade.

No. K106—KEEN KUTTER®; 14x16 Gauge.

Length, feet	4½	5	5½	6
Width at Center, inches.....	6¼	6¾	7	7¼
Weight each net about, lbs....	4	5	6	7
Each	\$2.60	2.90	3.20	3.50



Lance Tooth, Perforated, Wide Blade.

No. K108—KEEN KUTTER®; 14x18 Gauge.

Length, feet	5½	6	6½	7
Width at Center, inches.....	6¼	6½	6¾	7
Weight each net about, lbs....	6½	7	8	9
Each	\$4.25	4.50	5.00	5.25

No. K109—KEEN KUTTER®; 14x19 Gauge.

Length, feet	5½	6	6½	7
Width at Center, inches.....	6¼	6½	7	7¼
Weight each net about, lbs....	6	7	8	9
Each	\$4.50	4.75	5.25	5.50

TRADE MARKS:
E. C. SIMMONS' KEEN KUTTER;
REGISTERED.

CROSS CUT SAWS.

Without Handles.

If Handles are Wanted, Invariably Specify Separately for Them.

KEEN KUTTER*.

Highest Grade Crucible Steel; Thin Back; Teeth Extra Filed and Carefully Set, Ready for use.

No. K200—KEEN KUTTER*; Extra Polished and Etched; Champion Tooth, Narrow Blade; 14 Gauge.

Length, feet	5	5½	6	6½
Width at Center, inches	3¾	3¾	3¾	3¾
Weight each net about, lbs.	3½	4	4½	5
Each	\$2.00	2.20	2.40	2.60

No. K202—KEEN KUTTER*; Extra Polished and Etched; Diamond Tooth; Narrow Blade; 14 Gauge.

Length, feet	5	5½	6	6½
Width at Center, inches	2¾	2¾	3¼	3¼
Weight each net about, lbs.	3½	4	4½	5
Each	\$2.20	2.40	2.60	2.80

For Shipment, One to Six Wide Blade, or One to Twelve Narrow Blade Saws as Ordered, are Wired to a Board Weighing about 7 lbs.

ONE MAN CROSS CUT SAWS.

With Supplementary Handle.

KEEN KUTTER Cross Cut Saws are made by the World's Best Saw Makers who put into them the Very Best Material and Workmanship.



KEEN KUTTER*.

Highest GRADE CRUCIBLE STEEL, EXTRA POLISHED AND ETCHED, Thin Back, Carefully Ground; Teeth Extra Filed and Set ready for use; Regular (or Butt) Handle, Selected Beechwood, Plain Sides, with Varnished Edges; Supplementary Handle, Varnished Beechwood; Polished Ferrule.

No. K300—KEEN KUTTER*; Champion Tooth.

Length, feet	2½	3	3½	4	4½	5
Weight each net about, lbs.	2½	3	4	5	6	7
Each	\$2.00	2.10	2.45	2.80	3.15	3.50

No. K304—KEEN KUTTER*; Lance Tooth; Perforated.

Length, feet	3	3½	4	4½	5
Weight each net about, lbs.	4	4½	5	6	6½
Each	\$2.55	3.00	3.40	3.85	4.25

Three in a Paper Package; Thirty-six in a Wood Box.



"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SIMMONS
TRADE MARK REGISTERED.



TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

HAND, RIP AND PANEL SAWS.

KEEN KUTTER*

HIGHEST GRADE CRUCIBLE SPRING STEEL, Extra Polished and Fancy Etched Blade; Carved and Var-
nished Applewood Handle; Fastened with Special Nickel Plated Screws; Taper-Ground Thin Back Blade;
Teeth Bevel-Filed by Hand and Accurately Set.

The Most Perfect Hand Saw for Car-
penter's Use ever offered to the Trade.



The Tempering of
this Saw is so Uni-
form and Perfect
that the Blade may
be Bent into a Cir-
cle, yet will spring
back Perfectly
Straight.

No. 88—KEEN KUTTER*, HAND; Sway Back, with Four Screws.

Length of Cutting Edge, inches	26	28
Greatest Width of Blade, inches	7 1/2	7 3/4
Width of Blade at Point, inches	2 1/2	2 3/4
Points to the inch	6, 7, 8, 9, 10, 11, 12	5, 6, 7
Weight per dozen about, lbs.	24	27
Per dozen	\$21.00	24.00

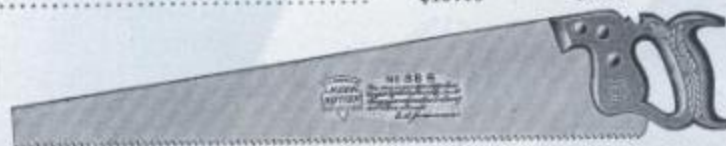
No. 88R—KEEN KUTTER*, RIP; Graduated Teeth, Sway Back, with Four Screws.

Length of Cutting Edge, in.	22	26	28
Greatest Width of Blade, in.	6 1/4	7 3/4	7 3/4
Width of Blade at Point, in.	2 1/4	2 3/4	2 3/4
Points to the inch	6, 7	4 1/2, 5, 5 1/2, 6	4 1/2, 5, 5 1/2, 6
Weight per doz. about, lbs.	20	24	27
Per dozen	\$18.50	21.00	24.00

No. 88—KEEN KUTTER*, PANEL; Sway Back, with Three Screws.

Length of Cutting Edge, inches	18	20	22	24
Greatest Width of Blade, inches	5 1/4	6 3/4	6 1/4	6 3/4
Width of Blade at Point, inches	2 1/4	2 3/4	2 1/4	2 3/4
Points to the inch	8, 9, 10, 11, 12	8, 9, 10, 11, 12	8, 9, 10, 11, 12	8, 9, 10, 11, 12
Weight per dozen about, lbs.	14	16	20	22
Per dozen	\$15.00	16.50	18.50	20.00

Bevel Hand Filed
Teeth.



Taper Ground
Thin Back Blade,
Lessens Friction
and prevents Bind-
ing.

No. 88/S—KEEN KUTTER*, HAND; Narrow, Straight Back, with Four Screws.

Length of Cutting Edge, inches	26
Greatest Width of Blade, inches	5 1/2
Width of Blade at Point, inches	1 1/2
Points to the inch	7, 8, 9, 10
Weight per dozen about, lbs.	20
Per dozen	\$21.00

Highest Grade,
Extra Refined
Crucible
Spring Steel.



Perfect Finish on
Blade and Extra
Carved Large
Handle. Screws
Set Well Apart.

No. 812—KEEN KUTTER*, HAND; Straight Back, with Four Screws.

Length of Cutting Edge, inches	26
Greatest Width of Blade, inches	7 3/4
Width of Blade at Point, inches	2 1/2
Points to the inch	6, 7, 8, 9, 10, 11, 12
Weight per dozen about, lbs.	26
Per dozen	\$28.00

No. 812—KEEN KUTTER*, RIP; Graduated Teeth; Straight Back, with Four Screws.

Length of Cutting Edge, inches	28
Greatest Width of Blade, inches	7 1/4
Width of Blade at Point, inches	2 1/2
Points to the inch	4 1/2, 5, 5 1/2, 6
Weight per dozen about, lbs.	28
Per dozen	\$32.00

No. 812—KEEN KUTTER*, PANEL; Straight Back, with Three Screws.

Length of Cutting Edge, inches	18	20	22	24
Greatest Width of Blade, inches	5 1/4	6 3/4	6 1/4	6 3/4
Width of Blade at Point, inches	2 1/4	2 3/4	2 1/4	2 3/4
Points to the inch	9, 10, 11, 12	9, 10, 11, 12	9, 10, 11, 12	9, 10, 11, 12
Weight per dozen about, lbs.	14	16	20	22
Per dozen	\$20.00	22.00	24.00	26.00

One-third Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

HAND, RIP AND PANEL SAWS.



Taper Ground,
Thin Back Blade.



Teeth Bevel Filed
by Hand and Ac-
curately Set.

KEEN KUTTER*

HIGHEST GRADE CRUCIBLE SPRING STEEL; Extra Polished and Fancy Etched Blade; Carved and Var-
nished Applewood Handle, Fastened with Special Nickel Plated Screws.

No. 816—KEEN KUTTER*, HAND; Straight Back, with Four Screws.

Length of Cutting Edge, inches..	26	28
Greatest Width of Blade, inches..	7 $\frac{1}{2}$	7 $\frac{1}{2}$
Width of Blade at Point, inches..	2 $\frac{3}{4}$	2 $\frac{3}{4}$
Points to the inch.....	6, 7, 8, 9, 10, 11, 12	5, 6, 7, 8, 9
Weight per dozen about, lbs.....	24	26
Per dozen	\$23.00	26.00

No. 816R—KEEN KUTTER*, RIP; Graduated Teeth; Straight Back, with Four Screws.

Length of Cutting Edge, inches.....	28
Greatest Width of Blade, inches.....	7 $\frac{1}{2}$
Width of Blade at Point, inches.....	2 $\frac{3}{4}$
Points to the inch.....	4 $\frac{1}{2}$, 5, 5 $\frac{1}{2}$, 6
Weight per dozen about, lbs.....	26
Per dozen	\$26.00

No. 816—KEEN KUTTER*, PANEL; Straight Back, with Three Screws.

Length of Cutting Edge, inches.....	18	20	22	24
Greatest Width of Blade, inches.....	5 $\frac{1}{4}$	5 $\frac{1}{2}$	6 $\frac{1}{4}$	6 $\frac{3}{4}$
Width of Blade at Point, inches.....	2 $\frac{3}{4}$	2 $\frac{3}{4}$	2 $\frac{3}{4}$	2 $\frac{5}{16}$
Points to the inch.....	9, 10, 11, 12	9, 10, 11, 12	9, 10, 11, 12	9, 10, 11, 12
Weight per dozen about, lbs.....	14	16	18	22
Per dozen	\$17.00	18.50	20.50	22.00



No. 999—FAST MAIL*, HAND.

Skew Back, with Four Screws.

Length of Cutting Edge, inches.....	26
Greatest Width of Blade, inches.....	6 $\frac{3}{4}$
Width of Blade at Point, inches.....	2 $\frac{3}{4}$
Points to the inch.....	6, 7, 8, 9, 10
Weight per dozen about, lbs.....	24
Per dozen	\$15.00

No. 999—FAST MAIL*, RIP.

Skew Back, with Four Screws.

Length of Cutting Edge, inches.....	28
Greatest Width of Blade, inches.....	7 $\frac{1}{2}$
Width of Blade at Point, inches.....	2 $\frac{3}{4}$
Points to the inch.....	4 $\frac{1}{2}$, 5, 5 $\frac{1}{2}$, 6
Weight per dozen about, lbs.....	28
Per dozen	\$17.00

No. 999—FAST MAIL*, PANEL; Skew Back, with Three Screws.

Length of Cutting Edge, inches.....	18	20	22
Greatest Width of Blade, inches.....	6	6 $\frac{1}{4}$	6 $\frac{3}{4}$
Width of Blade at Point, inches.....	2	2	2 $\frac{3}{4}$
Points to the inch.....	8, 9, 10, 11	8, 9, 10, 11	8, 9, 10, 11
Weight per dozen about, lbs.....	13	18	20
Per dozen	\$9.00	11.00	13.00

One-third Dozen in a Cardboard Box.



"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SIMMONS
TRADE MARK REGISTERED.

TRADE MARKS:
E. C. SIMMONS' KEEN KUTTER;
"SWIFT,"
REGISTERED.

HAND AND PANEL SAWS.



SWIFT*.

POLISHED CAST STEEL BLADE; Plain Beechwood Handle, Varnished Edges, with Three Steel Screws.

No. 1600—SWIFT*, HAND; Straight Back.

Length of Cutting Edge, inches.....	26
Greatest Width of Blade, inches.....	6
Width of Blade at Point, inches.....	2 3/4
Points to the inch.....	6, 7, 8, 9
Weight per dozen about, lbs.....	22
Per dozen.....	\$7.00

No. 1600—SWIFT*, PANEL; Straight Back.

Length of Cutting Edge, inches.....	16	18	20	22	24
Greatest Width of Blade, inches.....	4 1/4	4 7/8	5	5 1/4	5 7/8
Width of Blade at Point, inches.....	2	2 1/4	2 1/2	2 3/4	2 7/8
Points to the inch, Assorted.....	7 to 10	7 to 10	7 to 10	7 to 10	7 to 10
Weight per dozen about, lbs.....	11	13	15	18	22
Per dozen.....	\$4.00	4.50	5.00	5.50	6.00

One-half Dozen in a Cardboard Box.

BACK SAWS.

TEETH
CAREFULLY
SET AND
FILED



No. 44—KEEN KUTTER*.

Highest Grade Crucible Steel, Polished Blade; Teeth Set and Filed; Blued Steel Back; Apple Wood Handle with Varnished Edges; Three Nickel Plated Screws.

Length, inches.....	19	19	14	16
Extreme Width, inches....	3 3/4	3 3/4	4 1/4	4 1/4
Weight per doz. about, lbs..	14	16	20	26
Per dozen.....	\$13.00	15.00	17.00	19.00



No. 97—KEEN KUTTER*.

Adjustable and Reversible Combined Panel and Back Saw.

Highest Grade Crucible Steel, Polished Blade; Teeth Set and Filed; Polished Slotted Steel Back; Carved and Varnished Apple Wood Handle; Nickel Plated Screw and Adjustment Lever.

Length, inches.....	12	14	16
Width of Blade, inches.....	3 3/4	3 3/4	4 1/4
Weight per dozen about, lbs.....	18	22	26
Per dozen.....	\$20.00	22.00	24.00

Can be used for either Cross Cut or Ripping Purposes, being Toothed fine on one edge and coarse on the other. Blade can be adjusted to any depth so that it can also be used for making Mitre Cuts to good advantage.

MITRE BOX SAWS.



No. 44M—KEEN KUTTER*.

Highest Grade Crucible Steel, Polished Blade; Teeth Set and Filed; Blued Steel Back; Apple Wood Handle with Varnished Edges; Three Nickel Plated Screws.

Length, inches.....	22	24	26	28
Width under Back, inches....	4	4	4	5
Weight per dozen about, lbs...	34	38	42	51
Per dozen.....	\$26.00	28.00	30.00	36.00

NOTE—The Above Lengths are the Full Length of the Blade. The peculiar shape of Butt or Heel in these Saws makes the Toothed Edge about 2 inches shorter than the Full Length of the Blade.

CABINET SAWS.

Coarse Teeth for Soft Wood and Quick Cuts,
Fine Teeth for Cabinet Work.



KEEN KUTTER*.

Highest Grade Crucible Spring Steel Blade, Full Polished and Etched; Adjustable to Different Angles; Blade has Coarse Teeth on one Side and Fine on the other; All Teeth Set and Filed; Hole in End to hang up if desired; Carved and Varnished Apple Wood Handle; Nickel Plated Screw and Wing Nut for tightening.

No. 91—Length of Blade 12 inches; Width 3 3/4 inches; Weight per dozen about 12 lbs....\$12.00

One-third Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

COMPASS SAWS.



No. 93—KEEN KUTTER*.

Highest Grade Crucible Spring Steel, Polished Blade, Thin Back; Apple Wood Handle with Varnished Edges; Two Nickel Plated Screws.

Length of Blade, inches.....	12	14	16
Weight per dozen about, lbs.....	6	6½	7
Per dozen	\$4.25	4.50	4.75

One-half Dozen in a Cardboard Box.



KEEN KUTTER*

INTERCHANGEABLE.

Highest Grade Crucible Spring Steel, Polished and Etched Blade, Thin Back; Carved and Varnished Apple Wood Handle; Nickel Plated Screw and Wing Nut.

No. 95—KEEN KUTTER*:	Length of Blade 12 inches;	Per Dozen
Weight per dozen about 6 lbs.....		\$8.00
One-half Dozen in a Cardboard Box.		

No. 95B—Extra Blades, Polished; For No. 95 Com-	
pass Saws; Length 12 inches; Weight per	
dozen about 2 lbs.....	3.00
Packed Loose.	

INTERCHANGEABLE NESTS OF SAWS.

Quick adjustment by a turn
of a Tightening Lever.



No. 96.

KEEN KUTTER*

Highest Grade Crucible Spring Steel, Polished and Etched Blade, Thin Back; Carved and Varnished Apple Wood Handle; Nickel Plated Screw and Tightening Lever.

No. 96—KEEN KUTTER*:	Including: 1 Handle with	Per Doz. Sets
Screws; 1 Keyhole Blade 10 inches Long;		
1 Compass Blade 14 inches Long; 1 Pruning		
Blade 18 inches Long; Weight per dozen Sets		
about 9 lbs.....	\$20.00	
One-half Dozen Sets in a Cardboard Box.		

No. 960—KEEN KUTTER*:	Including: 1 Handle with	Per Doz. Sets
Screws; 1 Keyhole Blade 10 inches Long;		
1 Compass Blade 14 inches Long; Weight per		
dozen Sets about 8 lbs.....	\$14.00	

No. 96K—Extra Keyhole Blades:	10 inches Long; For Nos. 96 and 960 Saws; Weight per doz. about 1½ lbs..	\$2.25
No. 96C—Extra Compass Blades:	14 inches Long; For Nos. 96 and 960 Saws; Weight per doz. about 2 lbs..	3.25
No. 96P—Extra Pruning Blades:	18 inches Long; For No. 96 Saws; Weight per dozen about 2½ lbs.....	5.25

Packed Loose.

KEYHOLE SAWS.



Iron Pad Keyhole Saws.

KEEN KUTTER*

HIGHEST GRADE CRUCIBLE SPRING STEEL, POLISHED BLADE; Japanned Malleable Iron Handle, 4¾ inches Long, 1¼ inches Wide; BLADE IS REVERSIBLE and Butt End forms a Screw Driver Blade; Round Flat Head, Knurled Nickel Plated Thumb Screw.

No. KP—KEEN KUTTER*:	Length of Blade 7 inches; Weight per dozen about 2½ lbs.....	\$3.00
No. KB—Extra Blades, Polished; FOR No. KP SAWS; Weight per dozen about ½ lb.		1.40
No. KH—Extra Handles or Pads, Japanned; FOR No. KP SAWS; Weight per dozen about 2 lbs.....		.60

One Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

STAIR BUILDERS' SAWS.

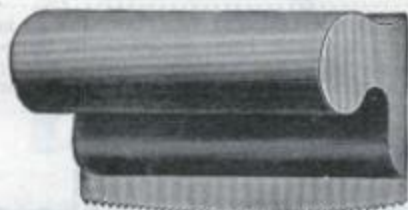


KEEN KUTTER*

Per Dozen

No. KK6—KEEN KUTTER*; Applewood Body, Belted Finish, with Varnished Edges, Shaped into Two Handles, 4½ inch Grip Handle and 3 inch Guide Handle; Highest Grade Crucible Steel Blade, 6 inches Long, Held in Place by Two Brass Screws; Teeth Set and Filed; Blade Adjustable to Project from ½ to 1 inch; Length over all 11½ inches; Weight per dozen about 9 lbs. \$7.50
One-half Dozen in a Cardboard Box.

VENEER SAWS.



Per Dozen

No. 1—With 4½ inch Crucible Steel Blade, Tempered; Ash Handle 4½ inches Long; Weight per dozen about 2 lbs. \$3.00
One Dozen in a Cardboard Box.

BUTCHER SAW BLADES.



No. K—KEEN KUTTER*; HIGHEST GRADE CRUCIBLE SPRING STEEL, Blued, with Punched Ends; ¾ inch Wide; 13 Teeth to the inch; Extra Tempered, Filed and Set, Ready for Use.
Length, inches 16 18 20 22 24 26
Wgt. dozen about, lbs. 1 1½ 1¾ 1½ 1½ 1½
Per dozen \$6.00 6.25 6.50 6.75 7.00 7.25
One Dozen in a Cardboard Box.

SAW PUNCHES.

Nickel Plated Malleable Iron Frame; Tempered Crucible Steel Punch and Die, Operated by Screw and Lever; Length 5½ in.; Slot ¾ in. Deep.



GOODELL.

Per Dozen

No. 200—GOODELL; Weight per dozen about 6 lbs. \$8.00
One-twelfth Dozen in a Cardboard Box.

NOTE—Few Butcher Saw Blades are Punched, Ready For Use, and one of these No. 200 Punches is indispensable; They are Small but Powerful.

COIL SAW BLADES.



KEEN KUTTER*

No. F—KEEN KUTTER*; Highest Grade; Blued; 11 Teeth to the inch.

Width, inches	5/8	3/4
Weight per coil about, lbs.	1½	1¾
Per coil	\$4.75	5.00

One Coil in a Cardboard Box.

HACK SAW BLADES.



Highest Grade Crucible Aluminum Steel, Hardened, Natural Finish; Teeth Set and Sharpened.

No. KR—KEEN KUTTER*; MEDIUM TOOTHED, 16 Teeth to the inch; For General Metal Cutting.

Length, inches	8	9	10	12	14	16
Width, inches	½	¾	¾	¾	¾	¾
Per dozen	\$1.25	1.35	1.50	1.80	2.25	2.75

No. KF—KEEN KUTTER*; FINE TOOTHED, 24 Teeth to the inch; For Sheet Metal or Tubing.

Length, inches	8	9	10	12
Width, inches	½	¾	¾	¾
Per dozen	\$1.25	1.35	1.50	1.80

No. KFF—KEEN KUTTER*; EXTRA FINE TOOTHED, 32 Teeth to the inch; For Light Sheet Metal or Tubing.

Length, inches	8	9	10	12
Width, inches	½	¾	¾	¾
Per dozen	\$1.25	1.35	1.50	1.80

One Dozen in a Package; Six Dozen in a Cardboard Box; Weight per Box about 2¼ lbs.

For Use in Power Machines.

Highest Grade Crucible Aluminum Steel, Tempered Throughout; Milled Teeth; Natural Finish; Teeth Set and Sharpened; for General Metal Cutting.

No. KP—KEEN KUTTER*; 21 Gauge; 15 Teeth to the inch; ¾ inch Wide.

Length, inches	12	14	17
Center to Center of Hole, inches.	12	12½	16½
Weight per dozen about, lbs.	1	1½	1½
Per dozen	\$1.35	1.65	2.20

No. KPP—KEEN KUTTER*; 18 Gauge; 10 Teeth to the inch; 1 inch Wide.

Length, inches	17
Center to Center of Hole, inches.	16½
Weight per dozen about, lbs.	2¾
Per dozen	\$2.50

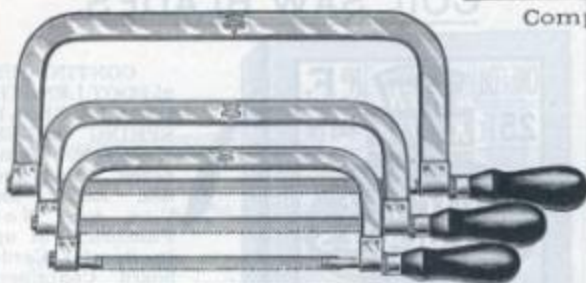
One Dozen in a Cardboard Box.

TRADE MARK
B. C. SIMMONS' KEEN KUTTER
REGISTERED

HACK SAWS.

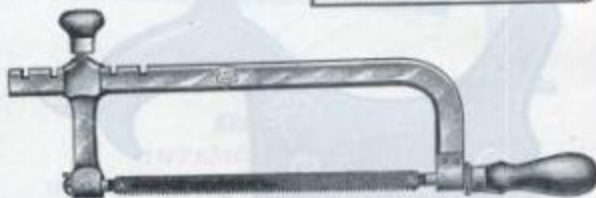
Complete.

A High Grade Tool for
Machinists' or Railroad
use.



No. 108 Series.

KEEN KUTTER*



No. 1812.

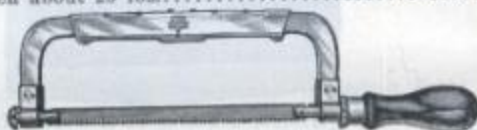
FULL NICKEL PLATED FRAMES; Polished Rosewood Handle, complete with One KEEN KUTTER Highest Grade Crucible Aluminum Steel Blade; Blade is Tightened by turning Handle, which is fitted with a Hard Brass Screw Bushing; Lugs on the Blade Pins permit the Blades to be faced up or down, or to either side, as desired.

- Per Dozen
- No. 108—KEEN KUTTER*, EXTRA HEAVY; FOR 8 INCH BLADES; Not Adjustable; Frame is made of $\frac{3}{4} \times \frac{1}{4}$ inch Steel; Depth from Inside of Back to Cutting Edge $3\frac{1}{2}$ inches; Length of Handle $4\frac{1}{2}$ inches; Length over all $15\frac{1}{2}$ inches; Weight per dozen about 13 $\frac{1}{2}$ lbs. \$20.00
- No. 110—KEEN KUTTER*, EXTRA HEAVY; FOR 10 INCH BLADES; Not Adjustable; Frame is made of $\frac{3}{4} \times \frac{1}{4}$ inch Steel; Depth from Inside of Back to Cutting Edge $3\frac{3}{4}$ inches; Length of Handle $4\frac{1}{2}$ inches; Length over all $17\frac{1}{2}$ inches; Weight per dozen about 16 $\frac{1}{2}$ lbs. 30.00
- No. 112—KEEN KUTTER*, EXTRA HEAVY; FOR 12 INCH BLADES; Not Adjustable; Frame is made of $1 \times \frac{1}{4}$ inch Steel; Depth from Inside of Back to Cutting Edge $5\frac{1}{2}$ inches; Length of Handle $4\frac{1}{2}$ inches; Length over all 20 inches; Weight per dozen about 24 lbs. 40.00
- No. 1812—KEEN KUTTER*, EXTRA HEAVY; ADJUSTABLE FOR 8, 9, 10, 11 OR 12 INCH BLADES; Frame is made of $\frac{3}{4} \times \frac{1}{4}$ inch Steel, with Notched Back for Adjustment; Malleable Iron; Nicked and Burnished Sliding Front Piece, fastened by Rosewood Grip Screw Handle; Supplied with One 10 inch Blade; Depth from Inside of Back to Cutting Edge $3\frac{3}{4}$ inches; Length of Handle $4\frac{1}{2}$ inches; Length over all (extended for 12 inch Blade) $19\frac{1}{2}$ inches; Weight per dozen about 25 lbs. 60.00



Strength
and
Lightness
Combined.

KEEN KUTTER*



FULL NICKEL PLATED FRAME, Polished Rosewood Handle, complete with One KEEN KUTTER Highest Grade Crucible Aluminum Steel 8 inch Blade; Blade is tightened by turning Handle, which is fitted with a hard Brass Screw Bushing; Lugs on the Blade Pins permit the Blades to be faced up or down, or to either side, as desired.

- Per Dozen
- No. 188—KEEN KUTTER*, MEDIUM WEIGHT; NOT ADJUSTABLE; FOR 8 INCH BLADES; Frame is made of $\frac{3}{4} \times \frac{1}{4}$ inch Steel; Depth from Inside of Back to Cutting Edge 2 $\frac{1}{2}$ inches; Length of Handle $4\frac{1}{2}$ inches; Length over all 15 inches; Weight per dozen about 11 lbs. \$15.00

One-twelfth Dozen in a Cardboard Box.

- Per Dozen
- No. 188A—KEEN KUTTER*, MEDIUM WEIGHT; ADJUSTABLE; FOR 8, 9, 10, 11 OR 12 INCH BLADES; Frame is made of $\frac{3}{4} \times \frac{1}{4}$ inch Steel, with Steel Sheath, into which the sections of the Frame are held by Tempered Steel Springs; Dimensions same as No. 188; Extreme Length, extended, for 12 inch Blade, 20 inches; Weight per dozen about 13 lbs. \$25.00

METAL CUTTING SAWS.



KEEN KUTTER*

HIGHEST GRADE CRUCIBLE SPRING STEEL BLADE, Full Polished and Etched; Extra Fine Hard Tempered Teeth, Carefully Filed, but not Set; Carved and Varnished Applewood Handle; Polished Screw and Wing Nut for Tightening.

No. 106—KEEN KUTTER*.

	18	20	24
Length of Cut, inches.....	15	15	15
Teeth to the inch	12	12 $\frac{1}{2}$	13 $\frac{1}{4}$
Weight per dozen about, lbs.	\$24.00	26.00	30.00
Per dozen			

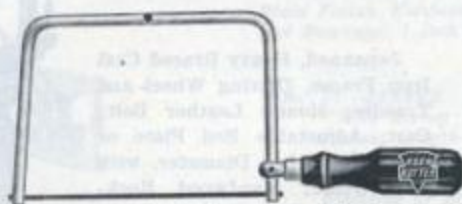
One-third Dozen in a Cardboard Box.

NOTE: KEEN KUTTER* Metal Cutting Saws will readily cut through light Metal, Nails, etc. Especially suitable for wrecking and remodeling Frame Buildings, etc. In Wood, they make a Smooth Cut, adapted for Close Fitting and Finishing Work.



TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

COPING SAWS.



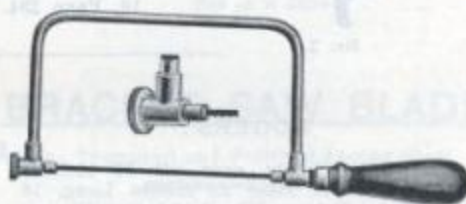
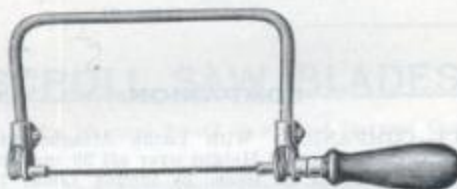
Nickel Plated Steel Frames, Notched at Both Ends so that Blades can be Faced Up or Down or to Either Side as Desired.

No. K6—KEEN KUTTER®: FOR 6 INCH BLADES; Complete with 12 Steel Blades; Black Rubberoid Finish Hardwood Handle; Nickel Plated Steel Tang Riveted through Handle, Nickel Plated Brass Ferrule; Length of Handle 4 inches; Depth under Back 4 inches; Length over all 10¼ inches; Weight per dozen about 5¼ lbs. \$7.50

One-twelfth Dozen in a Cardboard Box.

No. KB6—KEEN KUTTER® Extra Blades; 6 inch; For No. K6 Coping Saws; Weight per gross about ½ lb. \$2.75

One-twelfth Gross in a Package; One Gross in a Cardboard Box.



Nickel Plated Steel Frame; Polished Hardwood Handle 3½ inches Long; With Six 6 inch Steel Blades; Blades may be faced in any desired direction without removing from the work. Length over all 12 inches; Depth under Back 4 inches.

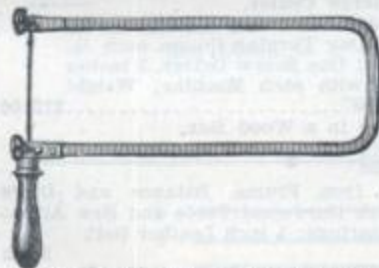
No. 12—JONES' CABLE; Tubular Frame, with Cord running through, connecting both ends of Blade, making same Adjustable by simply turning the Handle; Weight per dozen about 7 lbs. \$15.00

One-twelfth Dozen in a Cardboard Box.

No. 300—STANDARD; Ratchet; Solid Wire Frame, with Ratchet Nut at Outer End and Ratchet on Handle, for Adjusting Blade; Weight per dozen about 6 lbs. \$9.00

One-sixth Dozen in a Cardboard Box.

SCROLL SAWS.



Nickel Plated Spring Steel Frame; Thumb Screws for Fastening Blades.



No. 2—BRACKET; NOT ADJUSTABLE; With 3¾ inch Brad Awl and 12 Steel Blades, 5 inches Long; Depth of Frame 11½ inches; Polished Rosewood Handle 4 inches Long; Three Printed Sheets of Full Size Designs or Patterns also Tracing Paper, included with each Saw; Weight per dozen about 13 lbs. \$15.00

For Extra Blades, see Griffin's Bracket Saw Blades, Nos. 1 to 10, Page 294.

One-twelfth Dozen in a Cardboard Box.

No. J—JEWELERS' ADJUSTABLE; WITHOUT BLADES; Will accommodate Blades from 4 to 7½ inches Long; Polished Cocobolo Handle 4 inches Long; Knurled Face Lock Nut; Depth under Back 2¼ inches; Length over all, when fully extended, 12½ inches; Weight per dozen about 5 lbs. \$9.00

One-quarter Dozen in a Cardboard Box.

No. JB—Extra Blades for No. J Jewelers' Saws; Tempered Spring Steel, Blued Finish, 4¾ inches Long; Weight per gross about 3 ozs. \$2.50

One-twelfth Gross in a Package.

SCROLL SAWS.



No. 1.

Japanned, Heavy Braced Cast Iron Frame, Driving Wheel and Treadle; Round Leather Belt; Cast, Adjustable Bed Plate or Rest, $7\frac{1}{2}$ inches Diameter, with Saw Guide; Hardwood Rocking Arms, $20\frac{1}{2}$ inches Long, taking 5 inch Blades, with Wing Screws and Eccentric Lever for Tightening Blades; Automatic Saw-Dust Blower on Upper Arm; Complete with One Dozen 5 inch Blades, $4\frac{1}{4}$ inch Wrench, Belt Copplings, and Set of Full Size Designs.

For Extra Blades, See Griffin's Bracket Saw Blades, Nos. 1 to 10, Page 294.



No. C1.

ROGERS'.

No. 1—ROGERS'. Height over all 37 inches; Measurement at Base 23 inches Long, 16 inches Wide; Driving Wheel 12 inches Diameter; Steel Shaft with Balance Wheel $5\frac{1}{2}$ inches Diameter; Belt Wheel 12 inches Diameter; and Wing Screw to Hold Drill Points; One Drill Point, Each $\frac{7}{16}$, $\frac{1}{2}$, and $\frac{1}{16}$ inch, included with Each Saw; Weight each about 43 lbs..... \$3.50

One in a Wood Box.



No. 45.

COMPANION.

No. C1—COMPANION. With Lathe Attachment; Angular Frame; Height over all 39 inches; Measurements at Base, 25 inches Long, 15 inches Wide; Driving Wheel 13 inches Diameter; with Two Grooves to give a Change of Speed; Steel Shaft with Emery Wheel $\frac{3}{4}$ inch Flat Face, 4 inches Diameter; Wing Screw to hold Drill Points; Two Speed Cone Pulleys, 3 inches Diameter; Swing of Lathe 5 inches; Bed 24 inches Long; Distance between Centers 14 inches; One Double Adjustable Tool Rest, $11\frac{1}{2}$ inches Long; and One Single Tool Rest, 4 inches Long; Tail Stock has Screw Feed Center, and can be secured at any point by Clamp; Head Stock has one Spur and One Screw Center.

One Drill Point, Each, $\frac{1}{16}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, and $\frac{3}{8}$ inches; One Turning Gouge, each $\frac{1}{2}$, $\frac{3}{4}$, and $\frac{1}{4}$ inches; One Screw Driver, 5 inches Long, included with each Machine; Weight each about 76 lbs..... \$12.00

One in a Wood Box.

Painted; Cast Iron Frame, Balance and Drive Wheels; Plain Finish Hardwood Table and Saw Arms; Steel Arbors and Bearings; 1 inch Leather Belt.

Each

No. 45—BARNES' TREADLE (Factory No. 7); Height over all 44 inches; Length of Table 34 inches; Width 20 inches; Swing around Table, under Arm, 24 inches; Treadle Board, Length 34 inches; Diameter of Balance Wheel 9 inches; Arms, Length 31 inches; Complete with 12 7-inch Tempered and Polished Steel Blades; Assorted Widths as follows: 4 each $\frac{3}{4}$, $\frac{7}{8}$, $\frac{1}{2}$ inch; Plain Finish Hardwood Treadle Board; Weight each about 95 lbs.... \$15.00

One in a Wood Case.

***SCROLL SAWS.**

No. 51.

Painted; Cast Iron Frame, Balance, and Drive Wheels;
Plain Finish Hardwood Table and Saw Arms; Steel Arbors
and Bearings; 1 inch Leather Belt.

Each

±No. 51—BARNES' VELOCIPEDE (Factory No. 2).
With Boring Attachment; Height over all 48
inches; Length of Table 34 inches; Width 20
inches; Swing Around Table, under Arm, 24
inches; Diameter of Balance Wheel 9 inches;
Diameter of Drive Wheel 21 inches; Saw Arms
31 inches Long; Cranks 5 inches Long; Seat 15
inches Wide; Boring Attachment Belt $\frac{3}{8}$ inch,
Round Leather; Boring Attachment can be used
with Bits any size up to $\frac{1}{4}$ inch; Complete with
12-7 inch Tempered and Polished Steel Blades,
Assorted Widths as follows: 4 each $\frac{1}{16}$, $\frac{3}{16}$,
and $\frac{1}{4}$ inch; Painted Cast Iron Seat, Cranks,
Pedals and Boring Attachment Arm; Weight
each about 130 lbs.....\$20.00

±No. 53—BARNES' VELOCIPEDE (Factory No. 2):
Without Boring Attachment; Otherwise same
as No. 51; Weight each about 130 lbs..... 18.00
One in a Case.

SCROLL SAW BLADES.

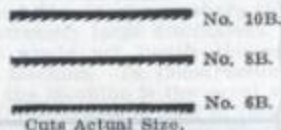
For Barnes' Scroll Saws and Barnes' Combined Machines; Tempered and Polished Spring Steel.



BARNES'
Scroll Saw Blades.

	Per Dozen
$\frac{1}{8}$ inch Wide; 7 inches Long.....	\$0.65
$\frac{3}{16}$ inch Wide; 7 inches Long.....	.65
$\frac{1}{4}$ inch Wide; 7 inches Long.....	.65

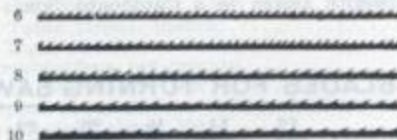
Weight per Dozen about 2 ozs.
One Dozen in a Package.

BRACKET SAW BLADES.

BARNES'
Bracket Saw Blades.

	Per Dozen
No. 6B—7 inches Long.....	\$0.25
No. 8B—7 inches Long.....	.25
No. 10B—7 inches Long.....	.25

Weight per Dozen about $\frac{1}{2}$ oz.
Twelve Dozen in a Package.

BRACKET SAW BLADES.**GRIFFIN'S.**

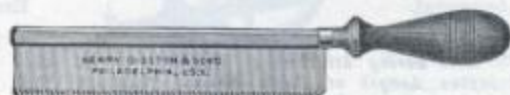
Tempered Spring Steel, Natural Finish; 5 inches Long.

Nos.	1	2	3	4	5	6	7	8	9	10
Per gross	\$1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.20	1.30	1.40

One Gross in a Package; Weight per Gross about $\frac{1}{2}$ lb.



DOVE TAIL SAWS.



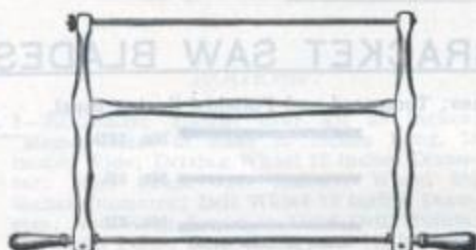
Extra Quality Spring Steel, with Polished Steel Back; Polished Beechwood Handle; Width of Blade $1\frac{1}{4}$ inches.

No. 19.

Length of Blade, inches	6	8	10	12
Weight per dozen about, lbs.....	9 $\frac{3}{4}$	11 $\frac{1}{4}$	13 $\frac{1}{2}$	16
Per dozen	\$7.25	7.75	8.75	9.50

One-third Dozen in a Cardboard Box.

TURNING SAWS.



Birchwood Frames, with Ebonized Handles; Tempered Steel Blades; There is an Index on each Handle to tell the Operator just how far to turn it; Friction is regulated by Screws; Each Frame Complete, with One Blade.

No. 50.

Length of Blade, inches	12	14	18
Weight per dozen about, lbs.....	15	18	19 $\frac{1}{2}$
Per dozen	\$11.00	11.50	12.00
Length of Blade, inches.....	20	22	24
Weight per dozen about, lbs.....	20 $\frac{1}{4}$	21	24
Per dozen	\$12.50	13.00	13.50

One-twelfth Dozen in a Cardboard Box.

EXTRA BLADES FOR TURNING SAWS.

Size, inches	12	14	18	20	22	24
Per dozen	\$1.45	1.60	2.00	2.25	2.50	2.80

Packed Loose.

BAND SAWS.



Heavy Base and Arm; Ribbed Table on Arms for Angle Adjustment; Tilted by means of a Screw and Hand Wheel in front of the Table and to the right of the operator; Table Tilts Both Ways; Angle is indicated on Dial on the front of the Machine. Cast iron Band Wheels with Rubber Bands Vulcanized to the Wheels; Tight and Loose Pulleys Accurately Balanced; Tight Pulley is Keyed to Shaft; Loose Pulley Bushed with Bronze and Equipped with Oil Cups; Can be Adjusted for Different Length Blades by means of a Hand Wheel; Roller Guides above and below Table.

BASE—46 inches Long and 23 inches Wide; Height 7 feet $1\frac{1}{2}$ inches.

TABLE—40 inches Long and 36 inches Wide; Height 40 inches from Floor; Bracket under Table 11x8 $\frac{3}{4}$ inches; Tilts 45 Degrees one way and 5 Degrees the other; Auxiliary Table 21x22 inches.

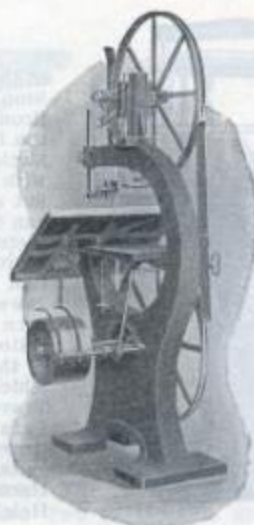
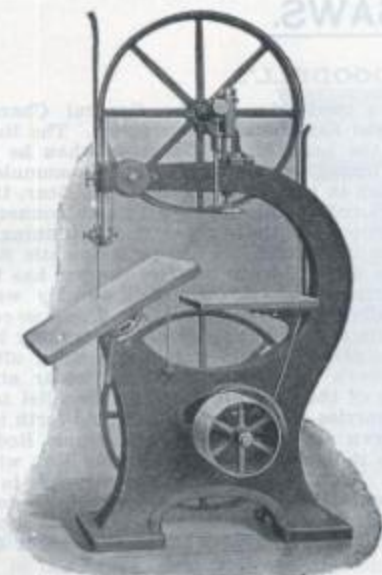
WHEELS—Diameter 38 inches; Carry Blades up to 2 inches Wide and from 18 to 20 feet Long; (20 foot Blade furnished); Tight and Loose Pulleys 12x4 $\frac{1}{2}$ inches; Total Floor space required 4 feet 6 inches by 5 feet 6 inches.

SPEED—450 Revolutions per Minute.

No. 16—As described above; Weight each, crated. Each about 3200 lbs.....\$450.00

One in a Crate.

BAND SAWS.



For all Regular Work in Factories, Planing Mills, Pattern Shops, and other Wood-working Establishments, this is usually considered the Standard Size Machine. It has Ample Strength and Capacity for any ordinary work. For completeness in detail, elegance of design, and Durability, the 36-inch Crescent Band-Saw will stand comparison with any in the market. The Frame is Cast in One Piece, Cored out Hollow Throughout. The Upper Shaft revolves in a Bearing $1\frac{1}{2}$ inches in Diameter, 12 inches Long. The Belt-shifter Handle is on Front Side of Machine. An Oil Chamber with self-oiling arrangement is provided for Loose Pulley. Table Tilts to any Angle up to 45 Degrees; Has a Quick-acting Locking Device and an Accurate Scale to show the Angle. The Machine has a Spring Tension for the Saw and Counter-balanced Hexagon Steel Guide Bar. Each Machine is furnished with One Anti-friction Roller Saw guide above Table, one Plain Guide Below Table, One Brazing Tong, One Brazing Clamp, and One Saw Blade $\frac{3}{4}$ inch Wide.

No.	36
Size of Wheels, inches.....	36x2
Distance clear from saw to frame, inches....	36
Height clear under guide, when raised, inches....	17
Size of Table (iron), inches.....	28x32
Size of Tight and Loose Pulleys, inches.....	12x4
Speed, revolutions per minute.....	400 to 450
Length of Saw Blade, feet.....	18½
Floor Space required, over all, inches.....	39x57
Shipping weight about, lbs.....	1200
Each.....	\$130.00

This is a Good Size Machine, where the work to be done is not of extremely large dimensions, or where the amount of work would not justify the purchase of a more expensive Machine. In Construction, Workmanship and Design the Machine is the equal of the 36 inch Size; and, like it, the Frame is Cast in One Piece, Cored out Hollow Throughout. The Upper Shaft revolves in a Bearing $1\frac{1}{2}$ inches Diameter, 10½ inches Long. The Belt Shifter Handle is on Front Side of Machine. An Oil Chamber with Self-oiling Arrangement is provided for Loose Pulley. Table Tilts to any Angle up to 45 Degrees; Has a Quick-acting Locking Device and an Accurate Scale to show the Angle. The Machine has a Spring Tension for the Saw. The Guide Bar is of Hexagon Steel; is not counterbalanced, as it is not Heavy enough to require it. Each Machine is furnished with One Anti-friction Roller Saw Guide above Table, One Plain Guide Below Table, One Brazing Tong, One Brazing Clamp, and One Saw Blade $\frac{1}{2}$ inch Wide.

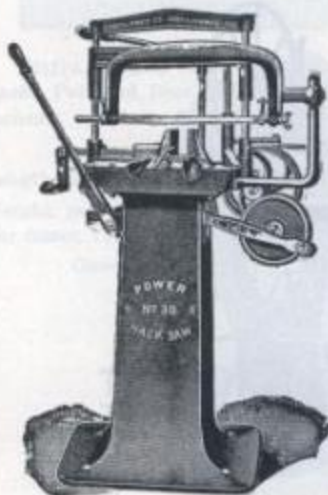
No.	32
Size of Wheels, inches.....	32x1½
Distance clear from saw to frame, inches....	32
Height clear under guide, when raised, inches....	13
Size of Table (iron), inches.....	24x28
Size of Tight and Loose Pulleys, inches.....	12x3½
Speed, revolutions per minute.....	400 to 450
Length of Saw Blade, feet.....	16½
Floor Space required, over all, inches.....	35x48
Shipping weight about, lbs.....	900
Each.....	\$105.00

One in a Crate.



POWER HACK SAWS.

GOODELL'S.



This Illustration conveys a good idea of the General Characteristics of this Machine. It is Compact and Economizes Floor Space. The Raising and Stop Levers are Convenient to the hand of the Operator when he stands in Front of the Machine. It has a Geared Drive. The Power is Communicated from the Pulleys to a Pinion Gear which in turn engages the Drive Gear, the Sliding Motion to Saw Frame being produced by the use of a Pitman connecting Gear with Frame. This not only produces a Perfectly Smooth Running Machine, but also requires but little power to operate. It has an Automatic Stop which can be set to stop the saw at any desired depth or after the bar has been completely cut off. The Stop or Starting Lever is connected directly with a Belt Shifter on the Tight and Loose Pulleys of the Machine. The Vise is so constructed that it is Perfectly Square with the Saw and the Bed of it extending beyond the Jaws avoids the possibility of sawing into the end of the work after it has been cut off, and will take in work $4\frac{1}{2} \times 4\frac{1}{2}$ inches. Particular attention is called to the fact that the Blade of the Saw always Runs Parallel to the Bed of the Vise. The Frame which carries the Saw runs back and forth in a Guide, which in Turn Slides up and down on the Perpendicular Guide Rod, and the Traveling Motion is conveyed to it by the Horizontal Guide Rod which Runs Parallel to the Blade of the Saw. Tight and Loose Pulley 6 inches in Diameter Geared 3 to 1, Machine should run 45 to 50 Strokes per minute to get best results. Pulley should run 150 Revolutions per Minute. One 12 inch Goodell Hack Saw Blade is furnished with each Machine. Extreme Height 43 inches; Height to Bed of Vise 28 inches.

No. 30—As Described Above; Weight each about 140 lbs. Each \$30.00

One in a Crate.



STAR.

Each

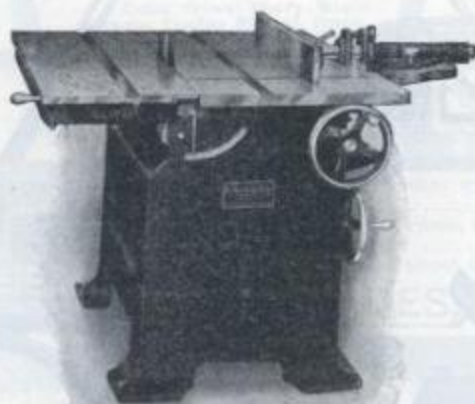
No. 8—STAR, Painted, Cast Iron Frame; Designed for Cutting Iron and Steel; it adapts itself to all kinds of work and cuts all shapes and sizes up to $4\frac{1}{2}$ inches in Diameter. It is Self-feeding, Requiring no attention while making a Cut, and Stops Automatically when the work is completed. It is arranged for Blades either 10, 11 or 12 inches in Length and can be adjusted to fit all; Six 12 inch Blades are furnished with each Machine. The Speed recommended is 45 Strokes per Minute. Size of Pulley $13\frac{1}{2} \times 2\frac{1}{2}$ inches; Height over all 4 feet; Length $2\frac{1}{2}$ feet; Weight each, crated for shipment, about 200 lbs. \$25.00

One in a Crate.

MT



UNIVERSAL SAW BENCH.



Modern in Construction; Superior in handling work in great variety; The Metal is carefully distributed resulting in the entire elimination of Vibration; The Table is divided into Two Sections, a Sliding Section of Suitable Width and a Stationary Section having Extension to facilitate the use of the Guide or Fence over the Entire Width of the Table; a Hardwood Strip is secured underneath the outside edge of Table Top to facilitate the use of Hand Screws when desired. The whole Top may be Tilted and operated at Any Angle between the Square (90 Degrees) and the Miter (45 Degrees) by simply turning the lower Hand Wheel which operates a Carefully Adjusted Worm Wheel, Arm and Lever, and is securely held in position without either tightening or loosening any Bolts or Nuts. A Dial which is easily read while working the Tilting Device will indicate the Exact Degree of Pitch attained. Equipped with an Idler Jack with Pulleys 6x6 inches. Two Universal Gauges for light work. Countershaft very Substantial, fitted with Two Hangers having Strong Journal Boxes; The Loose Pulley has a Bronze Bushing and never runs dry; The Unique Belt Shifting Device may be operated by means of a Lever and the workman does not have to leave his position at the Saw to use it quickly. Furnished with a 16 inch Rip Saw, a 16 inch Cut-off Saw, Ripping Gauge, Two Miter Gauges and One Cut-off Gauge, Countershaft, Hangers and Pulleys.

BASE—40 inches Long and 30 inches Wide; Height to Table 32 inches.

TOP—36x44 inches; Height from Floor 36 inches; Sliding Section 16 inches Wide and 44 inches Long; Stationary Section 20 inches Wide and 44 inches Long; Extension to Stationary Section 12 inches Wide; Tilts to Angle of 45 Degrees. Throat in Table can be opened to 2 inches.

SAW ARBORS— $1\frac{3}{16}$ inch in Diameter; where Saws are applied, 1 inch in Diameter; Yoke has Side Bearings, $6\frac{1}{2}$ inches Diameter, 2 inches Wide. Bearings, 5 and 4 inches Long, $1\frac{3}{16}$ inch Diameter. Pulleys, $4\frac{1}{2}$ inches Diameter, $5\frac{1}{2}$ inch Face. Speed of Arbors, 2770 Revolutions per Minute.

COUNTERSHAFT—Length 42 inches; Diameter, $1\frac{1}{2}$ inches; Hangers 14 inch Drop. Bearings 6 inches Long, $1\frac{1}{2}$ inches diameter. Tight and Loose Pulleys, 10 inches Diameter, 6 inch Face. Driving Pulley 20 inches Diameter, $5\frac{1}{2}$ inch Face. Speed, 625 Revolutions per Minute. Floor Space required, including Countershaft on floor, 88x48 inches.

HORSE POWER—Five.

CAPACITY—Will Rip Stock 26 inches Wide; when using a 16 inch Saw will Rip $4\frac{1}{2}$ inches Thick. Will Cut off 36 inches Wide up to $1\frac{1}{2}$ inches Thick; By using a Dado Head Grooves may be cut to $4\frac{1}{2}$ inches Wide. See page for Dado Heads.

No. 60—As Described Above; Weight each, crated, about 1900 lbs. Each \$700.00
One in a Crate.

WOOD TRIMMERS.

FOX UNIVERSAL.

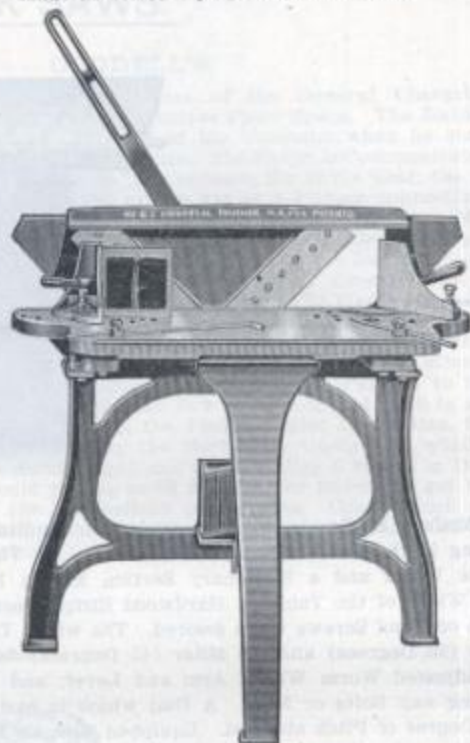
Painted Cast Iron Frames; Steel Blades.

Wherever it is desired to Accurately True up the end of a piece of Wood at any angle, there is nothing to equal one of these Trimmers. A Single Stroke of the Knife produces a surface which for Accuracy and Smoothness cannot be duplicated with a Block Plane and Bevel Protractor. Made in Three Styles and Seven Sizes.



No. 8F.

THE STYLE F TRIMMERS illustrated are made in Two Sizes; they are the Largest and most Complete Trimmers manufactured. They cover the widest range of Angles and have absolutely everything in the way of up-to-date features and conveniences which can be applied to Trimmer Construction. One of these should be used in every Pattern Shop, with a sufficient number of Small Sizes so that each workman will have Immediate and Convenient access to Trimmers for all work.



No. 6E.

THE STYLE E TRIMMERS illustrated are made in Two Sizes. They furnish a Medium Capacity, Medium Complete Machine at a moderate Price and are very popular.



No. 5A.

THE STYLE A TRIMMERS illustrated are made in Three Sizes, exactly similar in everything except capacity. They are desirable for use on each individual workman's bench, thus supplementing the Large, Full Universal, General Shop machine. They are also convenient for carrying from place to place.

Nos.	4A	5A	6A	4E	6E	6F	8F
Height of Cut, inches	4	4½	6	4	6	8	8
Length of Cut, inches	8	8	12½	9½	12½	19	24½
Size of Bed, inches	7½x17½	9½x20	11½x27½	13x29½	18x39½	18x35	24x40
Weight each about, lbs.	31	50	118	200	422	455	700
Shipping weight about, lbs.	45	65	155	230	480	555	825
Each	\$45.00	50.00	90.00	130.00	180.00	260.00	300.00

One in a Crate.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

WOOD SAWS.



No. K.

A High Class Saw. For
Temper, Finish and Cut-
ting Qualities Cannot be
Excelled.

Extra Select Heavy Maple
Frame, Double Riveted Brace,
with 26 inch Long Arm; 22 inch
Giant Pattern Steel Stretcher
Rod with Heavy Japanned Buckle.
Highest Grade Crucible Steel 30
inch Blued Blade.

KEEN KUTTER*

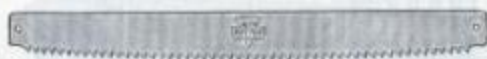


No. BE.

Per Dozen

- No. K—KEEN KUTTER* EXPERT; Carved Walnut Stained and Varnished Frame; with No. 95 KEEN KUTTER Expert
Peg Tooth Blade; Weight per dozen about 55 lbs. \$18.00
- No. BE—KEEN KUTTER BLUE BRAND*; Plain, Blue Painted and Varnished Frame, with No. 94 KEEN KUTTER Expert
Champion Tooth Blade; Weight per dozen about 55 lbs. 18.00
- One-half Dozen in a Box; Weight per Dozen about 55 lbs.

WOOD SAW BLADES.



No. 89. Common Tooth.



No. 90. Lightning Tooth.

For
Temper,
Finish
and
Cutting
Qualities
cannot be
Excelled.

KEEN KUTTER*



No. 94. Champion Tooth.



No. 95. Peg Tooth.

Highest Grade Crucible Spring Steel, Extra Thin Back; Patent Ground and Tempered; Extra Set and
Filed; Length 30 inches.

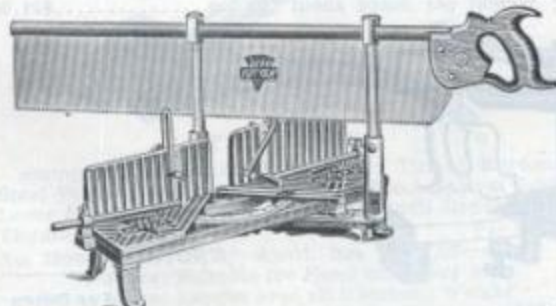
- | | Per Dozen | | Per Dozen |
|---|-----------|---|-----------|
| No. 89—KEEN KUTTER*; Polished; COMMON TOOTH;
Bow Belly; Assorted 4½ to 5½ Points;
Width at Center 2¼ inches; Weight per dozen
about 6¼ lbs. | \$7.00 | No. 98—KEEN KUTTER BLUE BRAND* Blued; PEG
TOOTH; Bow Belly; Extra Deep Cut;
Width at Center 2¼ inches; Weight per dozen
about 6¼ lbs. | \$8.00 |
| No. 90—KEEN KUTTER*; Polished; LIGHTNING
TOOTH; Straight Breast; Width at Center
2¼ inches; Weight per dozen about 6¼ lbs. | 7.00 | No. 94—KEEN KUTTER* EXPERT; Blued; CHAM-
PION TOOTH; Straight Breast; Width at
Center 2¼ inches; Weight per dozen about
6¼ lbs. | 10.00 |
| No. 86—KEEN KUTTER*; Polished; CHAMPION
TOOTH; Straight Breast; Width at Center
2¼ inches; Weight per dozen about 6¼ lbs. | 8.00 | | |

One Dozen in a Package.

USE E. C. SIMMONS' CARPENTERS' SPECIAL SLIM TAPER FILE for Filing all except PEG TOOTH
BLADES; (No. 98), USE 5 INCH CANT FILE.

MITER BOXES.

KEEN KUTTER*



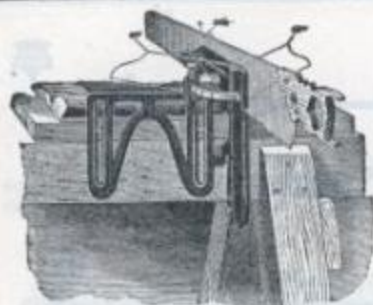
KEEN KUTTER*, Complete with Saw.

Cast Iron, Nickel Finish; Ribbed Back and Bottom;
Ground Surface; Saw Guides with Automatic Support by
which Saw is supported above work; Has Graduated Arc
in Front, Marked in Degrees, Angles and Sides; Furnished
with a Device that will Lock at any Degree or Angle;
Has Notches to Lock at Positive Angles commonly used;
To Extend Post to take in Larger Work, loosen the Hexa-
gon Nut on the Front Bar; Provided with Two Top
Clamps for holding Work in place; Also Two End Guides
which can be used for holding Work in place or as Length
Gauges.

This Box will take any Standard Saw such as KEEN
KUTTER or Disston.

Each

- No. K528—KEEN KUTTER*; Complete with Miter Box Saw No. 44MK, 28 inch; Size of Saw 5x28 inches; Capacity at
Right Angles 10¼ inches; Capacity at Miter 7 inches; Extreme Width of Base 6¼ inches; Length
over all 29 inches; Height of Back 3½ inches; Width of Bottom 4¾ inches; Legs 2½ inches Long;
Weight each, with Saw, about 26 lbs. \$20.00
- One in a Wood Box.



MITRE BOXES.

SEAVEY'S.

Cast Iron Frame, Riveted together, Painted Black; Thumb Screws and Graduated Arc, Nickel Plated. Any Hand Saw can be used. Box can be used on top of the wood or attached to a Bench or Board. In placing Saw between the Plates keep the Teeth below the Guides. Can be folded up so as to conveniently be carried in Tool Box or Coat Pocket. Angle desired to be cut can easily be adjusted on the Graduated Arc on the Side of Guide and is held in place by a Lug drawn into the Indentations on Bottom of Arc by Thumb Screw.

Each

No. 159—SEAVEY; WITHOUT SAW; Height over all 8 inches; Width over all 8 inches; Weight each about 2 lbs. \$2.50
One in a Wood Box, Four Dozen in a Case.

STANLEY'S.

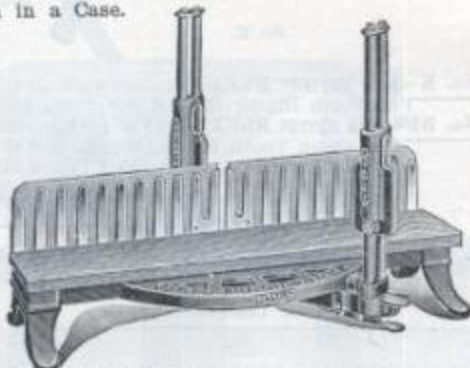
Cast Iron Single Piece Frame, With Malleable Iron Legs; Painted Red.

Each

No. 50½—STANLEY'S Adjustable, Without Saw; Takes Back or Panel Saw 20 inches Long; Extreme Width of Base 12 inches; Length over all 18½ inches; Weight each about 20 lbs. \$6.50

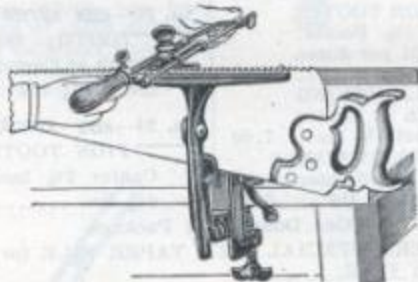
NOTE—The Swivel is provided with an Index Pin which engages holes in the Frame at the commonly used angles, but can be made stationary at any other angle desired by tightening the Machine Screw in front of the Swivel against the Frame.

One in a Wood Box.



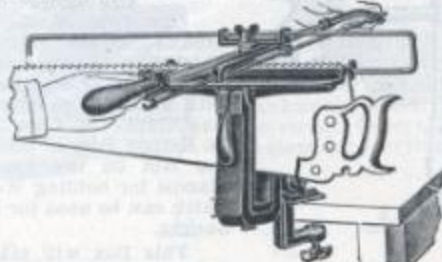
SAW FILERS AND CLAMPS.

Japanned Clamp: With Pivoted Outer Jaw, and Cam Lever to Tighten Same; Malleable Iron Adjustable File Attachments and Slide; Polished Steel Wire Guide; Complete with One 6 inch Slim Taper File, with Hardwood Handle; Clamps to Bench.



Per Dozen

No. 3/SF—STEARNS; With No. 3 Pattern 9½ inch Clamp; Plain Faced Jaws, Slide 11½ inches Long; File 6 inches Long, with 4½ inch Handle; Will File 12 inches without Changing position of Saw; Height over all 12½ inches; Width, in use, 15 inches; Weight per dozen about 108 lbs. \$24.00



Per Dozen

No. 3D—DISSTON'S; With Special Heavy 12½ inch Clamp; Plain Faced Jaws, Slide 16½ inches Long; Will File 13½ inches without changing position of Saw; Height over all 13 inches; Width in use 14 inches; Weight per dozen about 240 lbs. \$30.00

One-twelfth Dozen in a Wood Box.

TRADE MARKS:
E. C. SIMMONS' KEEN KUTTER;
REGISTERED.

SAW SETS.

KEEN KUTTER*



Malleable Iron, Nickel Plated; Blued Steel Screws, Spring and Sliding Gauge; Highest Grade Crucible Hardened Steel Plunger and Anvil; Loose Lever Handle at Bottom.



Finest Nicked
Finish; Best
Steel Setting
Parts.

No. 195—KEEN KUTTER*: Dial Pattern, with Revolving Anvil; Anvil can be set by the Dial on Front to a suitable bevel for setting Blades of from 4 to 16 points to the inch; Suitable for Hand and other Fine Tooth Saws; Length over all 7 inches; Weight per dozen about 8 lbs.\$15.00

Per Dozen

No. K3—KEEN KUTTER*: Regular Pattern; Suitable for Single Tooth Cross-Cut and Small Circular Saws; Sliding Anvil regulated by Set Screw; Length over all 9 inches; Weight per dozen about 17 lbs.\$15.00

Per Dozen

No. K4—KEEN KUTTER*: Regular Pattern; Suitable for Champion or Wide Tooth Cross-Cut Saws; Sliding Anvil regulated by Set Screw; Length over all 9 inches; Weight per dozen about 17 lbs.18.00



KEEN KUTTER*

Highest Grade Forged Steel Body, Nickel Plated; Flush Knuckle Lap Joint with Steel Screw and Spring; Sliding Malleable Iron Head, with Blued Steel Milled Edge Set Screw and Gauge Screw, with Lock Nut; Carefully Machined Anvil and Tapering Plunger; Carefully Shaped and Rounded Handles, Loose Handle at Bottom, Projecting Hand Brace on Top Handle.

Per Dozen

No. K100—KEEN KUTTER*: Suitable for all Sizes of Teeth from Finest Back Saws to Medium Cross-Cut Saws; Length over all 8½ inches; Weight per dozen about 12 lbs.\$22.00



TAINTOR'S.

Stamped Steel Handles and Head; Tinned Hardened Steel Plunger and Anvil; Coppered Steel Spring; Loose Lever Handle at Bottom; Revolving Anvil Regulated by Thumb Screw.

Per Dozen

No. 1900—TAINTOR'S; Anvil has 10 Different Pitches; Suitable for Hand and other Fine Tooth Saws; Length over all 6 inches; Weight per dozen about 7 lbs.\$18.00

One-half Dozen in a Cardboard Box.



HOTCHKISS' Hammer Pattern.

Cast Iron, Japanned; For Screwing into Bench; Hardened Steel Anvil and Plunger; Two Brass Adjustable Depth Gauges, Regulated by Set Screws; Set Screw for Gauging Angle of Set.

Per Dozen

No. 6—HOTCHKISS; Extreme Width 2¾ inches; Height over all 4¾ inches; Weight per dozen about 11 lbs.\$9.00



AIKEN'S, Hammer Pattern.

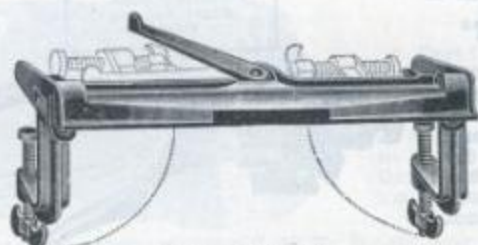
Full Polished; Cast Steel Hammer; Converted Steel Seat; Set Screw for Gauging Angle of Set.

Per Dozen

No. 2A—AIKEN'S PATTERN; Extreme Width 1½ inches; Height over all 3 inches; Weight per dozen about 6½ lbs.\$7.00

One Dozen in a Cardboard Box.

SAW CLAMPS.



STANDARD.

Cast Iron, Japanned; Overhanging Pattern, with Two Hinged Clamps (Open 2 inches), which Fold Compactly for Carrying; Rubber-Faced Jaws, actuated by Cam Lever.

No. 200—STANDARD; FOLDING; With 11 inch Jaws; Length over all 12½ inches; Width 3½ inches; Depth (Open), 5½ inches; Weight per dozen about 56 lbs. \$15.00

One-twelfth Dozen in a Cardboard Box.



STANDARD.

Cast Iron, Japanned; Overhanging Pattern, with Cam Lever to Tighten Jaws.

No. 100—STANDARD; With 11 inch Plain Jaws, with Screw Holes for Fastening to Bench; Length over all 13 inches; Width 3¼ inches; Weight per dozen about 36 lbs. \$7.50

One-quarter Dozen in a Cardboard Box.



Clamp Open.



Clamp Folded for Carrying.

STANDARD.

Malleable Iron Body, Lever and Cast Jaws, Japanned; Folding Pattern, with Cam Lever for Tightening Jaws; Folding Steel Wire Sharpened Hooks for Fastening to Bench, and with One Screw Hole on Body for same purpose.

No. 300—STANDARD; FOLDING; With 13½ inch PLAIN JAWS; Height of Body 7 inches; Thickness through Body ¾ inch; Weight per dozen about 42 lbs. \$12.00

One-twelfth Dozen in a Cardboard Box.



No. 1W.

STANDARD.



No. 3W.

Cast Iron, Japanned; WENTWORTH Pattern; Upright; With Rubber Faced Jaws; Pivoted Outer Jaw with Spring Cam Lever to Tighten Same.

No. 1W—TO SCREW TO BENCH, with 10½ inch Jaws; Height 9½ inches; Width 5½ inches; With Four Screw Holes; Weight per dozen about 60 lbs. \$9.50

No. 3W—TO CLAMP TO BENCH, with 9½ inch Jaws; Height Adjustable by Side Thumb Nut from 8¼ to 9½ inches; Width 5¼ inches; Clamp with 2 inch Opening; Weight per dozen about 72 lbs. 12.00

Packed Loose.



No. 0.

STANDARD.

Cast Iron, Japanned; Upright Pattern, with Pivoted Outer Jaw, and Cam Lever to Tighten Same.



No. 3.

Per Dozen

No. 0—TO SCREW TO BENCH, with 9 inch Plain Jaws; Height 8½ inches; Width 4 inches; With Four Screw Holes; Weight per dozen about 38 lbs. \$6.00

No. 3—TO CLAMP TO BENCH, with 9 inch Plain Jaws; Height Adjustable by Side Lever Screw from 8 to 9½ inches; Width 4½ inches; Clamp with 1½ inch opening; Weight per dozen about 54 lbs. 8.00

STANDARD.

Cast Iron, Japanned; Ball and Socket Pattern; Adjustable to many different positions, and securely locked by Lever Clamp; Pivoted Outer Jaw, with Thumb Nut to Tighten same.

No. 20—Ball and Socket; To Clamp to Bench; with 9½ inch Plain Jaws; Height 15 inches; Width 6½ inches; Clamp with 2½ inch Opening; Weight per dozen about 114 lbs. \$10.50

Packed Loose.



BENCH HOOKS.

Cast Iron Box and Screw Adjustment, Natural Finish; Top Plate and Edges, Polished; Cast Iron Head, Toothed on one Side for Holding Rough Work; Square Spindle, Polished; Adjustable and Reversible; Fastened to Bench by Four Screws.

MORRILL'S.

No. 1—MORRILL'S PATTERN; Screw Adjustment; Head $1\frac{1}{2} \times 1\frac{1}{2}$ inches; Extreme Height 4 inches; Top Plate $1\frac{1}{2} \times 3\frac{3}{4}$ inches; Weight per dozen about 12 lbs. \$10.00
One-half Dozen in a Cardboard Box.



Cast Iron Box, Ribbed, with Lever Cam, Painted Red; Steel Head, Toothed on One Side for Holding Rough Work; Round Spindle, Polished; Adjustable and Reversible; Fastened to Bench by Four Screws.

STEARNS'.

No. 8/1—STEARNS' Lever Adjustment; Head $1\frac{1}{2} \times 2$ inches; Extreme Height 6 inches; Top Plate $2\frac{1}{2} \times 2\frac{1}{2}$ inches; Weight per dozen about 17 lbs. \$9.00
One-half Dozen in a Cardboard Box.

QUILT FRAME CLAMPS.

No. B.

Cast Iron Frame and Screw; Japanned.

No. A—Opens $2\frac{1}{4}$ inches; PLAIN SCREW; Weight per dozen about 3 lbs. \$1.00
No. B—Opens $2\frac{1}{4}$ inches; SWIVEL HEAD ON SCREW; Weight per dozen about $4\frac{1}{4}$ lbs. 1.75
No. C—Opens 3 inches; SWIVEL HEAD ON SCREW; Weight per dozen about 4 lbs. 2.25
Nos. A and B Two Dozen; No. C One Dozen in a Cardboard Box.

CARRIAGE MAKERS' CLAMPS.

Plain Finish Malleable Iron Frame and Screw; Cut Threads; Swivel Head on End of Screw.

Nos.	$2\frac{1}{4}$ P	4P	6P	8P	10P
Opens, inches	$2\frac{1}{4}$	4	6	8	10
Wgt. per doz. about, lbs.	10	17	30	45	48
Per dozen	\$2.60	4.25	6.50	9.00	11.00

Nos. $2\frac{1}{4}$ P, 4P and 6P, One-half Dozen; Nos. 8P and 10P, One-quarter Dozen in a Cardboard Box.

**COLT'S PATTERN.**

Eccentric; Japanned; Malleable Iron Bar; Loose Self-Locking Rear Jaw, with Swivel Head.

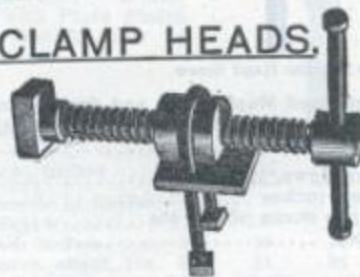
Nos.	0E	1E	2E	3E	4E
Opens, inches	$2\frac{1}{4}$	4	6	8	12
Weight per dozen about, lbs.	$5\frac{1}{2}$	$9\frac{1}{4}$	20	28	31
Per dozen	\$3.60	4.80	6.60	8.40	10.20

**STEARNS' PATTERN.**

Adjustable; Malleable Iron, Plain Finish; Movable Self-Locking Jaw, with Swivel Head on End of Malleable Iron Screw.

Nos.	3	4
Opens, inches	7	9
Weight per dozen about, lbs.	30	40
Per dozen	\$9.00	10.50

One-half Dozen in a Cardboard Box.

CLAMP HEADS.

Per Dozen

No. H—Wrought Iron Head, Plain Finish; Screw, Clamp and Handle; Diameter of Screw, 1 inch; Cut, Double Thread; Weight per dozen about 72 lbs. \$13.50
One Dozen in a Wood Box.



BENCH HOOKS.



MAPLE.

For Odd Sawing and Chiseling. Keeps the Bench from being marred.

No. 15—Size 8x12 inches; Size of Cleats 1x1½ inches; Weight per dozen about 23 lbs. Per Dozen \$4.00

BENCH STOPS.



Per Dozen Pairs

No. 2—German Pattern; Designed for Carvers and Cabinet Makers; Made of Tool Steel, Painted; Heads Tempered; ¾ inch Square Body, including Spring; 8½ inches Long over all; 7½ inches Long under Head; Weight per dozen pairs about 37 lbs. \$13.00
One-half Dozen Pairs in a Cardboard Box.

ADJUSTABLE HAND SCREWS.

JORGENSEN'S PATENT.



As Regular Hand Screw.



Positions for Beveled Work.



One Jaw Overlapping Other.

Seasoned Maple Jaws and Steel Spindles; Jaws Adjustable to any Angle and Position; Spindles have Right and Left Hand Threads insuring Rapid Adjustment; Spindles Work in Steel Sockets.

No.	J0	J1	J2	J3	J4	J5
Length of Jaws, inches	8	10	12	14	16	18
Jaws open, inches	4	6	8	10	12	14
Weight per dozen about, lbs.....	25	32	50	63	85	95
Per dozen	\$5.60	7.80	8.70	9.60	11.40	13.20

Packed Loose.

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CLAMPS.

STEEL BAR, JAPANNED; CARPENTERS';
Wrought Iron Screw, Malleable Iron
Slides, Screw Guide and Crank.

Nos.	2/SB	3/SB	4/SB	5/SB	6/SB
Opens, feet.....	2½	3	4	5	6
Wgt. per doz. about, lbs..	100	115	130	145	160
Each	\$1.50	2.00	2.25	2.50	2.75



COLT'S PATTERN ECCENTRIC; CABINET
MAKERS'; Japanned, Malleable Iron.

Nos.	1C	2C	3C
Opens, feet.....	2	3	4
Weight per dozen about, lbs.....	47	60	72
Per dozen.....	\$14.40	18.00	21.60



MOUNTED DOOR. Per Dozen

No. 10—Opens 4 feet; Wrought Iron Japanned
Mountings; Plain Wrought Iron Screw;
Well Seasoned Oak Bar, Natural Color;
Weight per dozen about 162 lbs.....\$22.50

DOOR CLAMP IRONS. Per Dozen

No. 5—EXTRA IRONS for Mounted Door Clamps
No. 10; Wrought Iron, Japanned; Plain
Wrought Iron Screw; Weight per dozen about
96 lbs.\$14.00

Packed Loose.

BENCH SCREWS.

No. 2WC.



No. 2½WS.

WOOD, COMMON V-THREAD.

Length of Handle Bar 15 inches; Length over all 23
inches.

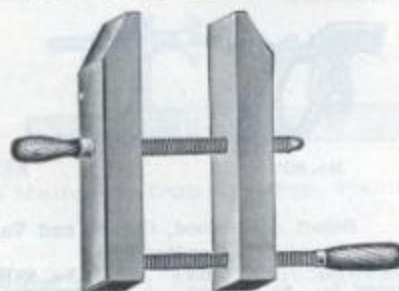
Nos.	2WC	2½WC	2½WS
Diameter, inches	2	2½	2½
Weight per dozen about, lbs.....	54	56	60
Per dozen	\$9.00	9.50	10.00

WOOD, SQUARE THREAD.

Length of Handle Bar 15 inches; Length over all 23
inches.

No.	2½WS
Diameter, inches	2½
Weight per dozen about, lbs.....	60
Per dozen	\$14.00

Two Dozen in a Case.

HAND SCREWS.

CARPENTERS'.

All Wood; Beechwood Jaws; Well Seasoned Hickory
Screws, Natural Finish.

Nos.	814	813	812	811
Diam. of Screw, in.	¾	¾	¾	¾
Length of Screw, in.	8	10	12	14
Length of Jaw, in...	7	8	10	12
Size of Jaws, in....	1½x1½	1½x1½	1½x1½	1½x1½
Jaws Open, in.....	3	4½	5½	7½
Wgt. per doz., lbs...	13	15	20	23
Per dozen	\$9.50	12.00	14.50	17.00

Nos.	809	807	805	802
Diam. of Screw, in.	¾	1	1½	1½
Length of Screw, in.	16	18	20	24
Length of Jaw, in...	14	16	18	20
Size of Jaws, in....	2x2	2½x2½	2½x2½	2½x2½
Jaws Open, in.....	8½	9½	10½	13½
Wgt. per doz., lbs...	45	70	100	120
Per dozen	\$20.00	23.50	27.00	32.00

Nos. 814, 813, 812 and 811, Packed Two Dozen; Nos. 809,
807, 805 and 802, Packed One Dozen in a Wood Box.



WROUGHT IRON.

Japanned; Double
Thread, with Plain Finish
Hickory Handle; Bar 12
inches Long.

Diameter Screw, inches.....	1	1½	1½	1½
Length from inside of Collar to End of Screw.....	13	13	14	16
Length over all, inches.....	16	16	17	20
Weight per dozen about, lbs.	68	81	94	148
Per dozen	\$6.75	7.50	9.00	12.00

1, 1½ and 1½, One Dozen in a Wood Box; 1½, One-
half Dozen in a Wood Box.

TRADE MARKS:
E. C. SIMMONS' KEEN KUTTER;
REGISTERED.

SAW HANDLES.



No. 88P.



No. 88H.



No. 812H.

KEEN KUTTER*

Select Applewood, Carved and Varnished; BORED READY FOR USE, Without Screws.

No. 88P—PANEL; for KEEN KUTTER No. 88, 18, 20 and 22 inch Panel Saws; Length over all $6\frac{1}{4}$ inches; Width $4\frac{1}{2}$ inches; Weight per dozen about 4 lbs. \$6.00*

No. 88H—HAND; for KEEN KUTTER No. 88, 26 inch Hand Saws; Length over all $7\frac{1}{4}$ inches; Width 5 inches; Weight per dozen about $5\frac{1}{2}$ lbs. \$7.50

No. 88R—RIP; for KEEN KUTTER No. 88, 28 inch Rip Saws; Length over all $7\frac{1}{4}$ inches; Width $5\frac{1}{4}$ inches; Weight per dozen about 5 lbs. 7.00

No. 812H—HAND; Large; Extra Carved; for KEEN KUTTER No. 812 and KEEN KUTTER Blue Brand No. 98, 26 inch Hand Saws and 28 inch Rip Saws; Length over all 8 inches; Width $5\frac{1}{2}$ inches; Weight per dozen about 6 lbs. \$7.50

Handsomely Carved
and Finely Polished.

SAW SCREWS.



Brass; Regular Pattern.

No. 1—PLAIN HEAD; SMALL SIZE; Suitable for Panel Saws; Diameter of Head $\frac{7}{16}$ inch; Length $\frac{1}{2}$ inch. \$0.40



Brass; Regular Pattern.

No. 2—PLAIN HEAD; LARGE SIZE; Suitable for Hand or Rip Saws; Diameter of Head $\frac{1}{2}$ inch; Length 1 inch. \$0.50
One Dozen in a Cardboard Box.



Brass; Regular Pattern.

No. 4—EMBOSSED HEAD; LARGE SIZE; Suitable for Hand or Rip Saws; Diameter of Head 1 inch; Length $1\frac{1}{16}$ inch. \$0.75



No. 1C.

Brass; Centennial Pattern.

No. 1C—PLAIN HEAD; SMALL SIZE; Suitable for Panel Saws; Diameter of Head $\frac{1}{2}$ inch; Length $1\frac{1}{16}$ inch \$0.50
No. 2C—PLAIN HEAD; LARGE SIZE; Suitable for Hand or Rip Saws; Diameter of Head $\frac{1}{2}$ inch; Length $\frac{1}{2}$ inch.60



No. 2C.



No. 3C.

Brass; Centennial Pattern.

No. 3C—EMBOSSED HEAD; SMALL SIZE; Suitable for Panel Saws; Diameter of Head $1\frac{1}{16}$ inch; Length $\frac{1}{2}$ inch \$0.75
No. 4C—EMBOSSED HEAD; LARGE SIZE; Suitable for Hand or Rip Saws; Diameter of Head $1\frac{1}{16}$ inch; Length $1\frac{1}{16}$ inch.85



No. 4C.

No. 1A—ASSORTMENT; Consisting of $\frac{1}{4}$ dozen No. 1C and $\frac{1}{12}$ dozen No. 3C. \$2.25
No. 2A—ASSORTMENT; Consisting of $\frac{1}{4}$ dozen No. 2C and $\frac{1}{12}$ dozen No. 4C. 2.75
One Assortment (4 Screws) in an Individual Cardboard Box; Two Dozen Boxes (96 Screws) in a Cardboard Carton.



REGULAR.

Per Dozen

No. B—REGULAR (or Butt) Handle; Selected Beechwood, Plain Sides, Varnished Edges, not Bored and without Screws; $8\frac{1}{2}$ inches Long, $5\frac{1}{2}$ inches Wide; Hand Hole $3\frac{1}{4} \times 1\frac{1}{4}$ inches; Weight per dozen about 7 lbs. \$6.00
12 Dozen in a Case.

ONE MAN SAW HANDLES.



SUPPLEMENTARY.

Per Dozen

No. A—SUPPLEMENTARY (or Point) Handle; Varnished Beechwood; $5\frac{1}{4}$ inches Long, $1\frac{1}{16}$ inches in Diameter; $1\frac{1}{2}$ inch Polished Ferrule; Malleable Stretcher Pin 3 inches Long, with Rivet and Hook; Weight per dozen about 4 lbs. \$3.00

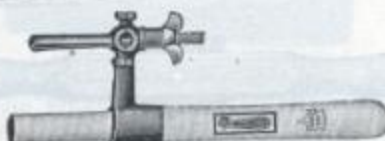
Packed Loose.

TRADE MARK:
B. C. SIMMONS' KEEN KUTTER:
REGISTERED.

CROSS CUT SAW HANDLES.



Sectional View of No. 1400.



KEEN KUTTER®

Select Scored Beechwood Grips, Belted Finish, with Malleable Iron Castings, Painted Red.

No. 1400—KEEN KUTTER®; THROUGH BOLTED LOOP PATTERN; 15½ inches Long, 1¼ inches in Diameter; Japanned, Heavy, Notched Bell Ferrule 2¼ inches Long; Tinned Malleable Loop 5 inches Long, with 4 inch Slot, Screwed to Steel Bolt, which extends clear through Wood Grip; Weight per pair about 2 lbs. \$0.75

Per Pair

50 Pairs in a Case.

No. 900—KEEN KUTTER®; W. M. & C. PATTERN; 13½ inches Long, 1¼ inches in Diameter; 1¼ inch Ferrule; 3¼ inch Arm; Tinned Steel Loop 6½ inches Long, with 3¼ inch Slot; Blade can be faced in Four Different Directions; Weight per pair about 2½ lbs. \$0.60

Per Pair

Handsomely Scored; Can be held Firmly. Metal Parts Heavy Malleable Iron.



No. 800.

KEEN KUTTER®



No. 1100.

Select Scored Beechwood Grips, Belted Finish, with Malleable Iron Castings, Painted Red.

No. 800—KEEN KUTTER®; LOOP PATTERN; 12 inches Long, 1¼ inches in Diameter; Japanned, Heavy Bell Ferrule and Revolving Washer 2¼ inches Long; Tinned Loop 8½ inches Long, with 4½ inch Slot; Weight per pair about 2 lbs. \$0.50

Per Pair

50 Pairs in a Case.

No. 1100—KEEN KUTTER®; CLIMAX; REVERSIBLE PATTERN; 15¼ inches Long, 1¼ inches in Diameter; 3 inch Japanned Sheaths; Tinned Screw Clasp and Thumb Nut; Weight per pair about 2 lbs. \$0.45

Per Pair

PLANE HANDLES.

KEEN KUTTER®



FOR KEEN KUTTER® PLANES.

No. KH3—Varnished Rosewood; To fit KEEN KUTTER Iron Planes Nos. KK3, KK3C, KK4, KK4C and KK10½; Weight per dozen about 2 lbs. \$4.20

No. KH5—Varnished Rosewood; To fit KEEN KUTTER Iron Planes Nos. KK4½, KK4½C, KK5, KK5C, KK5½, KK5½C, KK6, KK6C, KK7, KK7C, KK8, KK8C and KK10; Weight per dozen about 2 lbs. 4.20

No. KH26—Varnished Beechwood; To fit all numbers of KEEN KUTTER Wood Bottom Planes; Weight per dozen about 1½ lbs. 2.40

One Dozen in a Cardboard Box.

Per Dozen

TURNING TOOL HANDLES



Applewood, Polished Finish; Brass Ferrule; Length over all 9 to 10 inches.

Nos.	1	2	3	4	5
Size of Ferrule, inches..	½	9/16	¾	11/16	¾
Per dozen	\$1.15	1.20	1.40	1.50	1.60
Nos.	6	7	8	9	10
Size of Ferrule, inches..	13/16	¾	15/16	1	11/16
Per dozen	\$1.85	2.10	2.40	2.70	2.75

Packed Loose; Weight per Dozen about 3½ lbs.

AUGER HANDLES.

PECK'S ADJUSTABLE.

- No. 18—Polished Maplewood; Wrought Iron Clamps and Bolts; Wing Thumb Nuts; Length 18 inches; Weight per dozen about 12 lbs. \$6.00

One-half Dozen in a Package.



IVES'.

- No. 2—Polished Hickory Handle; Polished Steel Center Chuck and Clamp; In sets of Two Sizes; Small, 16 inches Long; Large, 18 inches Long; Weight per set about 2 lbs. \$1.50

One Set in a Package.



ROGER'S ADJUSTABLE.

- No. 3—Japanned Cast Iron Center Frame and Clamp, adjusted by Cast Iron Wing Nut; Polished Hardwood Handles, 1 1/4 inches Thick at End; Steel Ferrules; Shanks of Frame extend into Handles and are secured by Steel Rivet, which passes through Ferrule and Shank; Length of Handles 6 inches; Length over all 16 inches; Width over all at Frame 2 3/4 inches; Weight per dozen about 15 lbs. \$4.50

One-quarter Dozen in a Cardboard Box.



COMMON.

- No. 1—Plain Finish Hickory; Assorted Lengths 13 to 16 inches; Weight per dozen about 6 1/2 lbs. \$0.75

Two Dozen in a Bundle.

SCREW DRIVER HANDLES.

Per Dozen

- No. 3—Plain Finish Beechwood; Brass Ferrule; Assorted Sizes; To Fit Screw Drivers 4, 5, 6, 8 and 10 inches; Weight per dozen about 2 lbs. \$1.50

One Dozen in a Cardboard Box.

WOOD CARVERS' TOOL HANDLES.

Per Dozen

- No. C—Plain Finish Hardwood; Brass Ferrule; 6 Assorted Medium Sizes 4 1/2 to 6 inches Long; Weight per dozen about 1 lb. \$1.00

Six Dozen in a Cardboard Box.

FILE HANDLES.

Plain Finish Soft Wood; Polished Steel Ferrule.

Per Dozen

- No. 16—ASSORTED MEDIUM SIZES..... \$0.50
No. 17—ASSORTED LARGE SIZES..... .65

No. 16, 4 Dozen; No. 17, 3 Dozen, in a Cardboard Box.
Weight per Dozen about 1 1/2 lbs.



Per Dozen

- No. 118—Japanned Iron Handle and Clamp; Steel Set Screw Adjustable to hold any size Small Shank Tool; Length 5 inches; Weight per dozen about 4 lbs. \$3.00

One Dozen in a Cardboard Box.

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HANDLES.



SOCKET FIRMER CHISEL. Per Dozen

- No. 15—Plain Finish Hickory; LEATHER CAP-
PED; Assorted Regular Sizes, $5\frac{1}{4}$ to $6\frac{1}{2}$
Inches \$1.80
No. 150—ASSORTED LARGE SIZES, $5\frac{1}{4}$ to $6\frac{1}{2}$
Inches; Otherwise same as No. 15..... \$1.80



TANG BUTT CHISEL. Per Dozen

- No. 45—Plain Finish Hickory; LEATHER CAP-
PED; Brass Ferrule; Assorted Regular
Sizes, $4\frac{1}{4}$ to $4\frac{1}{2}$ inches..... \$2.50
Weight per Dozen about 2 lbs.



SOCKET FRAMING CHISEL.

- No. 166—Plain Finish Hickory; Heavy IRON FER-
RULE at Top; Assorted Regular Sizes, 6
to 7 inches; Weight per dozen about 3 lbs.... \$0.70



SOCKET FIRMER CHISEL.

- No. 167—Plain Finish Hickory; Assorted Large
Sizes, 6 to $7\frac{1}{4}$ inches; Weight per dozen
about 3 lbs..... \$0.50



COMMON BRAD AWL.

- No. 12—Plain Finish Hardwood; Brass Ferrule;
Assorted Sizes; Weight per dozen about
 $1\frac{1}{4}$ lbs. \$0.75

Three Dozen in a Cardboard Box.



PATENT SEWING AWL.

- No. 6 $\frac{1}{2}$ —Plain Finish Applewood; Steel Jaws and
Clamping Nut; Complete with Wrench;
Assorted Sizes; Weight per dozen about 1 lb. \$1.50

One Dozen in a Cardboard Box.



TANG FIRMER CHISEL. Per Dozen

- No. 35—Plain Finish Hickory; LEATHER CAP-
PED; Brass Ferrule; Assorted Regular
Sizes, $5\frac{1}{4}$ to $7\frac{1}{4}$ inches..... \$2.40



SOCKET FRAMING CHISEL. Per Dozen

- No. 25—Plain Finish Hickory; LEATHER CAP-
PED; Assorted Regular Sizes, $5\frac{1}{4}$ to $6\frac{1}{2}$
Inches \$1.80



SOCKET FIRMER CHISEL.

- No. 168—Plain Finish Hickory; IRON FERRULE
at Top; Assorted Large Sizes, 6 to 7
inches; Weight per dozen about 3 lbs..... \$0.75



TANG FIRMER CHISEL.

- No. 162—Plain Finish Hickory; Brass Ferrule;
Assorted Regular Sizes, 6 to $7\frac{1}{4}$ inches;
Weight per dozen about 3 lbs..... \$0.75



COMMON SEWING AWL.

- No. 10—Plain Finish Hardwood; Brass Ferrule;
Assorted Sizes; Weight per dozen about $\frac{3}{4}$
lbs. \$0.60



PATENT PEG AWL, LEATHER TOP.

- No. 6—Plain Finish Hickory; LEATHER
CAPPED; Steel Jaws and Clamping Nut;
Complete with Wrench; Weight per dozen
about 2 lbs..... \$1.50

TRADE MARK:
"KLINCHER,"
REGISTERED.

LIQUID KLINCHER* GLUE.

For Wood, Leather, Glass, Iron, Stone, Paper and Cloth.



KLINCHER*.

In Screw Top Tin Cans, for Mechanics' use.

	Per Dozen
$\frac{1}{2}$ Pt.—Weight per dozen	
about 10 lbs.....	\$3.25
1 Pt.—Weight per dozen	
about 20 lbs.....	5.40
1 Qt.—Weight per dozen	
about 40 lbs.....	9.50
$\frac{1}{2}$ Gal.—Weight per dozen	
about 76 lbs.....	18.50
1 Gal.—Weight per dozen	
about 144 lbs.....	36.00

$\frac{1}{2}$ Pints, Two Dozen; Pints and Quarts, One Dozen; $\frac{1}{2}$ and 1 Gallon, One-half Dozen in a Case.



KLINCHER*.

In Bottles, for Family use, with Brush.

	Per Dozen
1 Oz.—Weight per dozen	
about 3 lbs.....	\$1.07
2 Oz.—Weight per dozen	
about 6 lbs.....	1.65

One Dozen Bottles in a Cardboard Box; 1 oz., Twelve Dozen; 2 oz., Six Dozen in a Case.



KLINCHER*.

In Screw Top Tin Cans, with Brush, for Family use.

	Per Dozen
$\frac{1}{2}$ Gm.—Weight per dozen	
about 4 lbs.....	\$1.65
1 Gm.—Weight per dozen	
about 8 lbs.....	2.20

One Dozen in a Cardboard Box; Three Dozen in a Case.



KLINCHER*.

	Per Case
Assorted Case; Contents: Two Dozen 1 oz. Bottles, One Dozen $\frac{1}{2}$ Gill Cans; One Display Stand 8 inches High, 7 inches Long, 6 inches Wide, and Advertising Cards.....	\$3.75

Weight per Case about 12 lbs.

HIDE AND BONE GLUE.

	Per Pound
Common; DARK SLATE COLOR	\$
Carpenters'; OLIVE DRAB COLOR	\$
No. C—Cabinet; DARK YELLOW COLOR	\$

Packed Loose.

STEEL WOOL.



A Mass of Fine Fibre of Steel, resembling Curled Hair; Does not Scratch, but will Cut as Smoothly as the Finest Abrasive Material; Best for Rubbing off Varnish, Shellac, etc., and various uses where Sandpaper, Pumice Stone and Rubbing Materials are used; Being Soft and Pliable, it adapts itself to the Shape of Carvings, Mouldings, etc., going into places where Sandpaper does not get in.

	Per Gross
No. 1—EQUALS SANDPAPER No. 0; Weight per gross about 62 lbs.	\$18.00
No. 3—EQUALS SANDPAPER Nos. 1 $\frac{1}{2}$ and 2; Weight per gross about 66 lbs.	18.00

3 ozs. in a Cardboard Tube, Size of Tube 7 inches Long, $\frac{1}{2}$ inch Diameter; One Dozen Tubes in a Box, Twelve Boxes in a Case.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

-316-



FLINT PAPER.

KEEN KUTTER®



In Reams.

In Rolls.

Lists Adopted by the Manufacturers, April 10, 1906.

Highest Grade Fibre Paper with Highest Grade Glue and Sifted Quartz
Coating, Carefully Gauged, Seasoned and Tested.

KEEN KUTTER® FLINT PAPER, IN REAMS of 20 Quires (480 Sheets), ¼ Ream

in a Package; Sheets, 9x11 inches.

Assorted

Nos.	KF00	KF0	KF½	KF1	KF1½	KF2	KF2½	KF3	KFA
Reams in a bundle.....	5	5	5	4	3	3	2	2	3
Weight per ream about, lbs.....	15	17	22	23	33	37	43	56	34
Per ream	\$6.25	6.25	6.25	6.75	7.25	7.75	8.25	9.50	7.25

KEEN KUTTER® FLINT PAPER, IN ROLLS, 50 yards Long, 24 inches Wide.

KF2½

Nos.	
Weight per roll about, lbs.....	40
Per roll	9.25

EMERY PAPER.

With Highest Grade Glue and Best Imported Emery Coating, Carefully Gauged,
Seasoned and Tested.

KEEN KUTTER® EMERY PAPER, IN REAMS of 20 Quires (480 Sheets), one Quire in a Package;

¼ Ream in a Bundle; Sheets, 9x11 inches.

Assorted

Nos.	KE00	KE0	KE½	KE1	KE1½	KE2	KEA
Reams in a bundle.....	5	5	5	4	3	3	3
Weight per ream about, lbs.....	16	24	28	28	35	38	25
Per ream	\$9.25	9.25	9.25	11.00	11.50	12.25	11.50

EMERY CLOTH.

With Highest Grade Glue and Best Imported Emery Coating, Carefully Gauged,
Seasoned and Tested.

KEEN KUTTER® EMERY CLOTH, IN REAMS of 20 Quires (480 Sheets), one Quire in a Package; ¼ Ream in a Bundle;
Sheets, 9x11 inches.

(Crocus)

Nos.	KCC	KC00	KC0	KC½	KC1	KC1½	KC2
Reams in a bundle.....	2½	2½	2½	2½	2	2	2
Weight per ream about, lbs.....	23	33	33	40	44	47	51
Per ream	\$26.50	26.50	26.50	26.50	28.50	29.75	30.75

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TRADE MARK:
H. C. SIMMONS' KEEN KUTTER
REGISTERED.

WRAPPING PAPER IN ROLLS.



Diameter of Rolls about 9 inches.

KEEN KUTTER* WATER MARKED.

A New Idea and the most novel Wrapping Paper on the Market; Made of 100% Sulphite Pulp, which gives to it strength not contained in Standard Sulphite Paper, 40 lbs. basis KEEN KUTTER being equal in Strength to 80 lbs. Standard Sulphite; Comparing the Wrapping Surface brings the Price of KEEN KUTTER to about the Same.

Nos.	KK9	KK12	KK15	KK18	KK20	KK24	KK30	KK36
Width, inches	9	12	15	18	20	24	30	36
Weight per Roll about, lbs.	17	22	29	34	38	46	57	68
Per pound	\$0.10	.10	.10	.10	.10	.10	.10	.10

Fibre Papers are made of Wood Pulp, the Quality being established by culling same. The first run Fibre being the longest, makes the Best Grade of Paper.

Printing on Roll Paper Free (with Our Advertisement). See Page 318B to 318J for Information.

No. 1—STERLING, EXPRESS, SODA BLEACHED, in Rolls; Basis 150 lbs. to Ream of 40x48 inches.

Width, inches	9	12	15	18	20	24	30	36
Weight per Roll about, lbs.	33	30	33	42	47	54	70	72
Per pound	\$0.07	.07	.07	.07	.07	.07	.07	.07

No. 2—REGAL, EXPRESS, SULPHITE BLEACHED, Drab Color, in Rolls; Basis 180 lbs. to Ream of 40x48 inches.

Width, inches	9	12	15	18	20	24	30	36
Weight per Roll about, lbs.	21	24	35	40	46	55	60	60
Per pound	\$0.06	.06	.06	.06	.06	.06	.06	.06

No. 7—STERLING, LIGHT MANILA, SULPHITE BLEACHED, in Rolls; Basis 40 lbs. to Ream of 24x36 inches.

Width, inches	9	12	15	18	20	24	30	36
Weight per Roll about, lbs.	19	24	34	40	45	55	58	70
Per pound	\$0.07	.07	.07	.07	.07	.07	.07	.07

No. 4P—STERLING, PINK, EXPRESS, SULPHITE BLEACHED, in Rolls only; Basis 40 lbs. to Ream of 24x36 inches.

Width, inches	9	12	15	18	20	24	30	36
Weight per Roll about, lbs.	22	26	32	40	45	55	58	70
Per pound	\$0.08	.08	.08	.08	.08	.08	.08	.08

No. 4R—STERLING, OX BLOOD, EXPRESS, SULPHITE BLEACHED, in Rolls only; Basis 70 lbs. to Ream of 24x36 inches.

Width, inches	9	12	15	18	20	24	30	36
Weight per Roll about, lbs.	20	30	36	43	48	50	56	72
Per pound	\$0.09	.09	.09	.09	.09	.09	.09	.09

No. 40R—STERLING, OX BLOOD, EXPRESS, SULPHITE BLEACHED, in Rolls; Basis 40 lbs. to Ream of 24x36 inches.

Width, inches	9	12	15	18	20	24	30	36
Weight per Roll about, lbs.	22	26	37	43	47	57	60	74
Per pound	\$0.09	.09	.09	.09	.09	.09	.09	.09

SOLD ONLY IN FULL ROLLS.

WRAPPING PAPER IN BUNDLES.



No. 2—REGAL, EXPRESS, SULPHITE BLEACHED, DRAB COLOR, in Bundles of One Ream; Basis 180 lbs. to Ream of 40x48 inches.

Size, inches	22x32	26x36	40x48
Weight per Ream about, lbs.	56	78	180
Per pound	\$0.06	.06	.06

One Ream in a Bundle; Sold Only in Full Bundles.

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ROLL PAPER HOLDERS AND CUTTERS.

**KEEN KUTTER***

Cast Iron Mountings, Fastened with Screws to Counter; Sharpened Steel Blade; Bases are made with **KEEN KUTTER** Design; Hardwood Top, Natural Finish, Varnished, with Colored Transfer of the **KEEN KUTTER** Trade Mark in the Center; Cuts show various Widths and Methods of combining and do not represent any one number; Numbers refer to one Width only; Any Combination desired can be made, as feet of Brackets are Detachable from Uprights and the latter can then be Attached by Screws to the Top Wooden Bar and then any number can be placed one above the other.

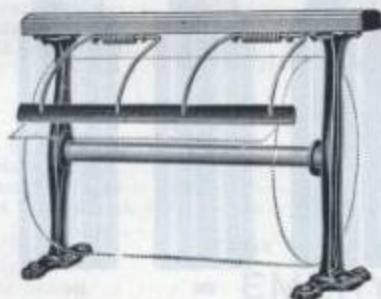
Metal Parts Nickel Plated and Highly

	Polished.	Each
No. KKN 8—Holds 1 Roll only, 6 inch.....		\$2.50
No. KKN 9—Holds 1 Roll only, 9 inch.....		2.65
No. KKN 12—Holds 1 Roll only, 12 inch.....		2.75
No. KKN 15—Holds 1 Roll only, 15 inch.....		2.90
No. KKN 18—Holds 1 Roll only, 18 inch.....		3.00
No. KKN 20—Holds 1 Roll only, 20 inch.....		3.25
No. KKN 24—Holds 1 Roll only, 24 inch.....		3.50
No. KKN 30—Holds 1 Roll only, 30 inch.....		3.75

Metal Parts Japanned.

	Each
No. KKJ 8—Holds 1 Roll only, 6 inch.....	\$2.00
No. KKJ 9—Holds 1 Roll only, 9 inch.....	2.15
No. KKJ 12—Holds 1 Roll only 12 inch.....	2.25
No. KKJ 15—Holds 1 Roll only 15 inch.....	2.40
No. KKJ 18—Holds 1 Roll only, 18 inch.....	2.50
No. KKJ 20—Holds 1 Roll only, 20 inch.....	2.75
No. KKJ 24—Holds 1 Roll only, 24 inch.....	3.00
No. KKJ 30—Holds 1 Roll only, 30 inch.....	3.25

Weight Each about 10 lbs.



Japanned Cast Iron Mounting to be Screwed on Counter; Varnished Hardwood Top; Steel Knife; Tension Regulated by Steel Springs.

Cuts show various widths and methods of combining, and do not represent any one number. Numbers refer to one width only. Any combination desired can be made, as brackets are interchangeable.



	Each
No. 8—Holds 1 Roll only, 6 inch.....	\$1.75
No. 9—Holds 1 Roll only, 9 inch.....	1.90
No. 12—Holds 1 Roll only, 12 inch.....	2.00
No. 15—Holds 1 Roll only, 15 inch.....	2.15

	Each
No. 18—Holds 1 Roll only, 18 inch.....	\$2.30
No. 20—Holds 1 Roll only, 20 inch.....	2.50
No. 24—Holds 1 Roll only, 24 inch.....	2.75
No. 30—Holds 1 Roll only, 30 inch.....	3.00

Weight each about 8 lbs.

PRICES DO NOT INCLUDE PAPER. Packed One in a Case.



EMERY.



Nos. 16

20

30

36

40

CF

F

FF

GRAIN EMERY Comprises Nos. 16 to 150 Grades.

GRAIN EMERY in 10 lb. Tin Cans; Size of Can 6 inches Deep, 6 inches High, 3 $\frac{3}{4}$ inches Wide.

Nos.	16C	20C	30C	36C	40C
Grain	16	20	30	36	40
Per pound	\$0.20	.20	.20	.20	.20

GRAIN EMERY, in Kegs, 150 to 300 lbs. each.

Nos.	16K	20K	30K	36K	40K
Grain	16	20	30	36	40
Per pound	\$0.15	.15	.15	.15	.15

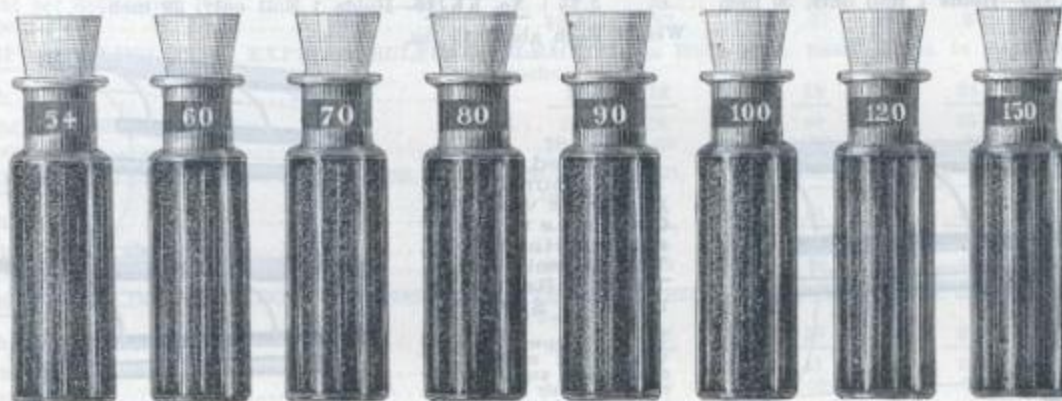
FLOUR EMERY Comprises Nos. CF, F and FF Grades.

FLOUR EMERY in 10 lb. Tin Cans; Size of Can 6 inches Deep, 6 inches High, 3 $\frac{3}{4}$ inches Wide.

Nos.	CFC	FC	FFC
Grade	CF	F	FF
Per pound	\$0.15	.15	.15

FLOUR EMERY, in Kegs, 150 to 300 lbs. each.

Nos.	CFK	FK	FFK
Grade	CF	F	FF
Per pound	\$0.10	.10	.10



Nos. 54

60

70

80

90

100

120

150

GRAIN EMERY, in 10 lb. Tin Cans; Size of Can 6 inches Deep, 6 inches High, 3 $\frac{3}{4}$ inches Wide.

Nos.	54C	60C	70C	80C	90C	100C	120C	150C
Grain	54	60	70	80	90	100	120	150
Per pound	\$0.20	.20	.20	.20	.20	.20	.20	.20

GRAIN EMERY, in Kegs, 150 to 300 lbs. each.

Nos.	54K	60K	70K	80K	90K	100K	120K	150K
Grain	54	60	70	80	90	100	120	150
Per pound	\$0.15	.15	.15	.15	.15	.15	.15	.15

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ALUNDUM GRINDING WHEELS.



Round Face.



Beveled Face.



Flat Face.

NORTON CO.'S
For General Use.

FLAT FACE.

Nos.	50	51	52	54	53	55	56	60 ¹ / ₄	60 ¹ / ₂	60 ³ / ₄	57	61	58	62
Grain of Alundum.....	80	60	80	60	60	46	46	60	46	60	60	46	60	46
Diameter, inches.....	4	4	6	6	6	6	6	6	6	6	8	8	8	8
Thickness, inches.....	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂
Weight each about, lbs.....	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	2	2 ¹ / ₂	2 ¹ / ₂	2	2	3 ¹ / ₂	3 ¹ / ₂
Each.....	\$0.75	1.10	1.40	1.40	1.75	1.75	2.40	2.40	3.05	3.05	2.60	2.60	3.60	3.60
Nos.	62 ¹ / ₂	59	63	63 ¹ / ₂	63 ³ / ₄	60	64	65	65 ¹ / ₂	66	66 ¹ / ₂	66 ³ / ₄	66 ¹ / ₂	64 ¹ / ₂
Grain of Alundum.....	36	46	36	46	30	60	46	46	30	46	36	30	46	46
Diameter, inches.....	8	8	8	8	8	10	10	10	10	10	10	10	10	10
Thickness, inches.....	1	1	1	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1	1	1 ¹ / ₂	1 ¹ / ₂	2
Weight each about, lbs.....	3 ¹ / ₂	4	4	6 ¹ / ₂	6 ¹ / ₂	3 ¹ / ₂	3 ¹ / ₂	5 ¹ / ₂	5 ¹ / ₂	6 ¹ / ₂	6 ¹ / ₂	10	10	14 ¹ / ₂
Each.....	\$3.60	4.60	4.60	6.60	6.60	3.65	3.65	5.00	5.00	6.35	6.35	9.05	9.05	11.75
Nos.	64 ¹ / ₄	67	68	69	72	70	73	71	74	75	77	76	78	79
Grain of Alundum.....	30	46	46	46	30	46	30	36	20	30	20	30	20	20
Diameter, inches.....	10	12	12	12	12	12	12	12	12	14	14	14	16	16
Thickness, inches.....	2	1 ¹ / ₂	1 ¹ / ₂	1	1	1 ¹ / ₂	1 ¹ / ₂	2	2	1 ¹ / ₂	2	2	2	2 ¹ / ₂
Weight each about, lbs.....	14 ¹ / ₂	4 ¹ / ₂	7	10 ¹ / ₂	10 ¹ / ₂	15	15	18 ¹ / ₂	18 ¹ / ₂	20	24	27 ¹ / ₂	36	46 ¹ / ₂
Each.....	\$11.75	4.00	6.00	7.40	7.40	10.70	10.70	14.00	14.00	15.05	19.45	19.45	25.00	30.80

BEVELED FACE.

Nos.	84	85	86	87	88	90	91	95	94	98	99	107	102	108
Grain of Alundum.....	80	60	80	60	60	46	46	60	46	36	46	36	46	36
Diameter, inches.....	4	4	6	6	6	6	8	8	10	10	10	12	12	12
Thickness, inches.....	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂
Weight each about, lbs.....	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	2	2	3 ¹ / ₂	3 ¹ / ₂	5 ¹ / ₂	4 ¹ / ₂	7	7
Each.....	\$0.75	1.10	1.40	1.75	1.40	2.40	2.60	2.60	3.65	3.65	5.00	4.00	6.00	6.00

ROUND FACE.

Nos.	109	110	111	112	113	114	115	117	118	119	120
Grain of Alundum.....	60	46	60	46	46	46	46	60	46	46	46
Diameter, inches.....	8	8	10	10	10	10	10	12	12	12	12
Thickness, inches.....	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂
Weight each about, lbs.....	1 ¹ / ₂	2	1 ¹ / ₂	2 ¹ / ₂	3 ¹ / ₂	3 ¹ / ₂	5 ¹ / ₂	3 ¹ / ₂	4 ¹ / ₂	5 ¹ / ₂	7
Each.....	\$2.10	2.60	3.00	3.35	3.65	4.35	5.00	3.80	4.00	5.00	6.00

Can Furnish any Size Hole Required. Packed Loose.

EMERY WHEEL DRESSERS.



HUNTINGTON PATTERN.

Each

No. HP—Japanned Malleable Iron Handle, Shank and Head; Tempered Tool Steel Cutters; Heavy Screw Axle; Two Sets of Cutters; Diameter of Cutters 1¹/₂ inches; Length over all 11¹/₂ inches; Weight each about 1¹/₂ lbs. \$4.00
One in a Cardboard Box.
Extra Cutters for No. HP Emery Wheel Dresser; Weight per Set about 2 ounces. \$1.00
Packed Loose.

TRADE MARKS:
E. C. SIMMONS' **KEEN KUTTER**
REGISTERED.

OIL STONES.



KEEN KUTTER* MOUNTED.

Mounted in Solid Mahogany, Lock Corner, Boxes, Varnished; Highest Grade Lily White Washita Grit Stone; Free from all Imperfections.

Per Dozen

No. KM6—KEEN KUTTER*; SIZE OF STONE 6x1 $\frac{1}{2}$ INCHES; Weight per dozen about 13 lbs. \$11.50

No. KMS—KEEN KUTTER*; SIZE OF STONE 8x1 $\frac{1}{2}$ INCHES; Wgt. per doz. about 19 $\frac{1}{2}$ lbs... 14.00
Six Dozen in a Case.



No. KBS.

KEEN KUTTER*.

Highest Grade Lily White Washita Grit; Free from all Imperfections.

Per Dozen

No. KB/S—KEEN KUTTER*; Round Edge Beveled Slips; About 3 $\frac{1}{2}$ inches Long, 2 inches

Wide; Extra Select; Wgt. per doz. about 3 lbs. \$3.60
One-quarter Dozen in a Cardboard Carton; Thirty-three and One-third Dozen in a Case.

Per Dozen

No. KPP—KEEN KUTTER*; Pen Knife Pieces; 4x1x $\frac{1}{2}$ inch; Weight per dozen about 1 $\frac{1}{2}$ lbs... \$2.40

One Dozen in a Cardboard Carton; Twelve Dozen in a Case.



KEEN KUTTER* UNMOUNTED.

Highest Grade Lily White Washita Grit; Free from all Imperfections.

Per Dozen

No. KG—KEEN KUTTER*; SIZE 6x2x1 INCH; Wrapped in Paper; Wgt. per doz. about 12 lbs.. \$9.00

No. KS—KEEN KUTTER*; SIZE 8x2x1 INCH; Wrapped in Paper; Wgt. per doz. about 15 lbs.. \$12.00

One-twelfth Dozen in a Cardboard Carton; Six Dozen in a Case.



KEEN KUTTER* AXE STONES.

Highest Grade Lily White Washita Grit; Free from all Imperfections.

Per Dozen

No. KA3—KEEN KUTTER*; 3x2x $\frac{5}{8}$ inches; Weight per dozen about 4 lbs. \$2.40

One-third Dozen in a Cardboard Carton; Twenty-five Dozen in a Case.

HOW TO USE OIL STONES.

A good Oil Stone may easily be ruined by improper usage or lack of care. A Stone must be carefully selected to conform to the work on which it is to be used. A mechanic who expects a single Stone to grind down his dull, nicked edge tools and, at the same time, to impart a keen edge on his fine tools, using any kind of oil that happens to be handy, will never keep a good Oil Stone.

Oil Stones are often complained of by users, saying that they will not cut, when, as a matter of fact, they are completely coated or varnished over with dried dirt, oil and steel dust in such a manner that the tool could not possibly come in contact with the grit, or "teeth", of the Stone.

A Stone should always be kept clean and moist. Any dryness or exposure to the air hardens it. This is why we put up **KEEN KUTTER** and **CHIPAWAY** Stones in individual boxes. The surface of an Oil Stone should be kept as level and smooth as possible, and this can easily be done by the user being careful to use each part of the Stone in turn in his work. The best oil for use with Oil Stones is a light, easy running oil like S. H. Co.'s Triplex Oil, which does not have a tendency to gum or harden.



INDIA OIL STONES.



Gouge Slips.

Special Slips with Concave and Convex Surfaces; The large Variety of Curves along its edges makes it Especially Suitable for Sharpening all Styles of Gouges or other round or Hollow Nosed Tools; The Smaller End is useful for Polishing out Hollow Die work, and the Larger Flat End can be used for Sharpening Straight Bevel Edge Tools.

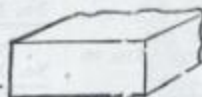
No. 21—Length 6 inches; Weight per dozen about 4½ lbs. Per Dozen \$ 9.00
One-twelfth Dozen in a Cardboard Box.

No. 21½—Length 9 inches; Weight per dozen about 11 lbs. 12.00
One-sixth Dozen in a Cardboard Box.



Medium Grit and Fine Grit.

No. 22—Size 4½x2½x½x⅜ inches; Weight per dozen about 4½ lbs. Per Dozen \$6.00
No. 22½—Size 6x2½x½x⅜ inches; Weight per dozen about 7½ lbs. 7.20
One-half Dozen in a Cardboard Box.



Medium Grit and Fine Grit.

No. 24—Size 4½x1½x½ inches; Weight per dozen about 4½ lbs. Per Dozen \$4.80
One-twelfth Dozen in a Cardboard Box.

-326-
OIL STONES.

WATER OR OIL.



MOUNTED.

	Per Dozen
No. M1½ —INDIA; Medium Grit; SIZE OF STONE 7x2x1 INCH; Weight per dozen about 20 lbs.	\$12.00
No. M2 —INDIA; Medium Grit; SIZE OF STONE 6x1½x¾ INCH; Weight per dozen about 12 lbs.	9.00

One in a Polished Hardwood Box.



UNMOUNTED.

	Per Dozen
No. UC1½ —INDIA; COMBINATION STONES; Medium on One Side, Fine on the Other; SIZE 7x2x1 INCH; Weight per dozen about 15 lbs.	\$12.00
No. UC2 —INDIA; COMBINATION STONES; Medium on One Side, Fine on the Other; SIZE 6x1½x¾ INCH; Weight per dozen about 7 lbs.	7.20

One-twelfth Dozen in a Cardboard Box.

NOTE.—These Stones are of an entirely different nature from emery goods and are adapted to the sharpening of all kinds of Tools and for use on all kinds of work for which the Arkansas, Washita and other Natural Stones of like nature are used.

They are superior to Natural Stones, as they cut faster, last longer and keep a better surface; also because of the entire absence of all faults common in the Natural Stone formation, i. e., sand seams, hard and soft spots, pebbles and fractures, proof of which is seen upon an examination of the Stone under a strong glass.

EMERY STONES.



CARPENTERS' COMBINATION OIL STONES.

	Per Dozen
No. E01 —SIZE 8x2x1 INCH; One side Coarse, the other Fine; Wgt. per doz. about 18 lbs.	\$10.00
No. E1 —SIZE 7x2x1 INCH; One side Coarse, the other Fine; Weight per dozen about 15 lbs.	9.00
No. E2 —SIZE 6x2x¾ INCH; One side Coarse, the other Fine; Wgt. per dozen about 10½ lbs.	7.00

One-twelfth Dozen in a Cardboard Box.



SOLID EMERY AXE.

Per Dozen

No. 12 —120 GRADE; Coarse, for Ordinary Edge Tools; Size 3x2x¾ inch; Weight per dozen about 5 lbs.	5.00
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One Dozen in a Cardboard Box.



UNMOUNTED.

	Per Dozen
No. UM/0 —INDIA; Medium Grit; SIZE 8x2x1 INCH; Weight per dozen about 18 lbs.	\$12.00
No. UM1½ —INDIA; Medium Grit; SIZE 7x2x1 INCH; Weight per dozen about 15 lbs.	9.00
No. UM2 —INDIA; Medium Grit; SIZE 6x1½x¾ INCH; Weight per dozen about 8 lbs.	6.00
No. UM3 —INDIA; Medium Grit; SIZE 4x1x¾ INCH; Weight per dozen about 2½ lbs.	3.60

One-twelfth Dozen in a Cardboard Box.



INDIA SLIPS, ROUND EDGE.

	Per Dozen
No. 14 —INDIA; Medium Grit; Round Edge Slips; SIZE 4½x1½x¾ INCH; Weight per dozen about 2 lbs.	\$4.20

One-twelfth Dozen in a Cardboard Box.



SOLID EMERY OIL.

	Per Dozen
No. 13 —4F GRADE; Finest Emery Flour, for Finest Edge Tools; Size 6x2x¾ inch; Weight per dozen about 9 lbs.	\$10.00
No. E14 —120 GRADE; Coarse, for Ordinary Edge Tools; Size 6x2x¾ inch; Weight per dozen about 10 lbs.	10.00

No. 16 —120 GRADE; Coarse, for Ordinary Edge Tools; Size 8x2x1¼ inches; Weight per dozen about 18½ lbs.	12.00
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SOLID EMERY SLIPS.

Per Dozen

No. 4 —120 GRADE; Coarse, for Ordinary Edge Tools; Size 4½x1½x¾ inch; Weight per dozen about 3 lbs.	3.00
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One Dozen in a Cardboard Box.

TRADE MARK:
"RUN EASY"
REGISTERED.

-327- GRINDSTONE FIXTURES.



Heavy
Strong
and
Carefully
Finished.



RUN EASY®.

Extra Heavy; Japanned Cast Iron; Double Roller Bearings; Shaft carefully Threaded; Length of Hand Crank, 9 inches; Length of Lever Crank, 3 inches; Diameter of Axle, 1½ inches; Bearing Cap, 7½ inches Long by 3 inches High; Diameter of Washers, 4¼ inches.

Nos.	115	117
Length of Axle, inches	15	17
Weight per dozen about, lbs.	120	132
Per dozen	\$8.00	9.60

One-half Dozen in a Case.



STANDARD.

No. 1—STANDARD. Japanned Cast Iron; Double Roller Bearings; Threaded Shaft; Average Length of Hand Crank, 9 inches; Average Length of Lever Crank, 3 inches; Bearing Cap, 6½ inches Long by 2½ inches High; Diameter of Washers, 3¼ inches.

Length of Axle, inches	15	17	19
Diameter of Axle, inches	¾	1	1½
Wgt. per doz. about, lbs.	80	85	96
Per dozen	\$6.00	7.00	8.00

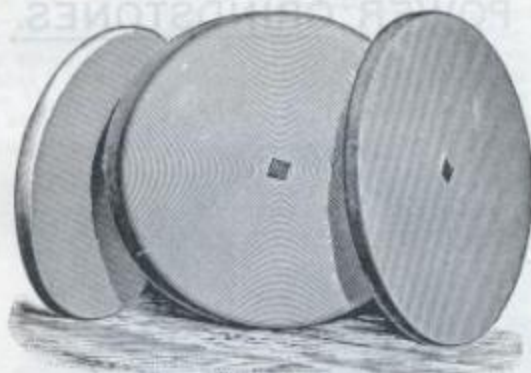
GRINDSTONE CRANKS.

No. 1/C—Japanned Cast Iron; Wood Grips;	Per Dozen
Length 9 inches; Fits No. 1 Grindstone	
Fixtures; Weight per dozen about 6 lbs.	\$2.50

GRINDSTONE AXLES.

No. 1A—Japanned Cast Iron; Fits No. 1, 15 and 17 inch Grindstone Fixtures.		
Length, inches	15	17
Per dozen	\$5.00	5.00
Weight per Dozen about 28 lbs.		

GRINDSTONES.



Berea Medium Grit, Unmounted, without Fittings, with Square Hole cut in center for Shaft.

Weight each assorted, lbs.	20 to 25	25 to 30	30 to 40	40 to 50	50 to 60	60 to 70
Thickness, inches	1½ to 2	1½ to 2	1½ to 2¼	1½ to 2¼	1½ to 2¼	2 to 2½
Diameter, inches	14	15	17	19	21	22
Per ton	\$60.00	60.00	60.00	50.00	50.00	50.00
Weight each assorted, lbs.	70 to 80	80 to 90	90 to 100	100 to 110	110 to 120	120 to 130
Thickness, inches	2 to 2½	2 to 3	2 to 3	2 to 3	2 to 3	2 to 3
Diameter, inches	22½	22½	23	23½	25	26½
Per ton	\$50.00	50.00	50.00	50.00	50.00	50.00

Packed Loose.

NOTE.—All the above Stones are sold by actual weight (or "cut weight"), which is the exact scale weight as the Stones come from the lathe. This weight is always cut into the Stone. Stones weighing 200 lbs. and over (not carried in stock), are sold by estimated weight, called "measurement weight."

-330- MOUNTED GRINDSTONES.

TRADE MARK: E. C. SIMMONS' KEEN KUTTER, REGISTERED

KEEN KUTTER*

Selected Berea Grit Stone, Mounted on Extra Braced and Bolted Tubular Steel Frame; Braced Securely with Heavy Material; All Rods and Bolts are Threaded; Painted Orange and Black; Weight of Stone 45 to 55 lbs.; Diameter 19 to 21 inches; Thickness $1\frac{1}{2}$ to $2\frac{1}{4}$ inches; Frame 34 inches Long, 16 inches Wide on Floor; Height of Frame from Floor to Axle 28 inches; Frame Tubing Front Legs $1\frac{1}{16}$ inch Diameter, with $\frac{1}{2}$ inch Rod Running Across Front Legs to give Strength to Frame, and prevent Legs from Sinking into Ground; Rear Legs $1\frac{1}{4}$ inch Diameter; Flat Steel Braces and Treadle $1\frac{1}{2}$ inches; Flat Steel Treadle Rod $3\frac{1}{2}$ inch; Japanned Malleable Iron Fixtures and Bearing Cap; Heavy Japanned Malleable Iron Water Guard $8\frac{1}{2}$ inches High, $3\frac{3}{8}$ inches Wide; Steel Saddle $10 \times 10\frac{1}{2}$ inches; Steel Drip Cup and Holder; Steel Axle 9 inches Long; Grated Steel Treadle Pad $4 \times 3\frac{1}{2}$ inches.



Showing Stone Complete, Set up.



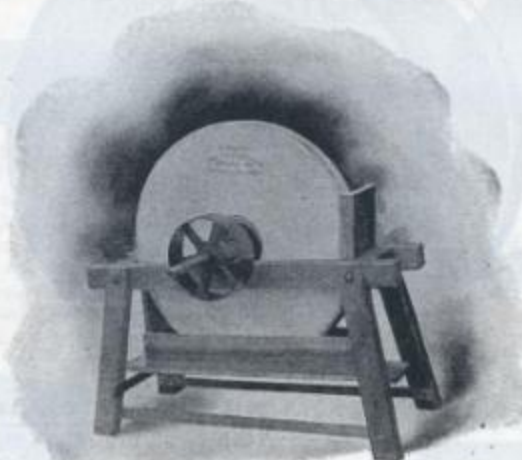
Showing Stone Crated for Shipment.
Each

No. KB—KEEN KUTTER*: Tubular Frame, with Steel Ball Bearings on both Shaft and Pitman; Weight each, Crated for Shipment, about 100 lbs. \$7.00
One in a Crate, Knocked Down.

EXTRAS FOR KEEN KUTTER* GRINDSTONES.

No. KBC—EXTRA CRANKS, with Set Screw, for No. KB; $4\frac{1}{2}$ inches Long; Weight each about 10 ozs.	Each \$0.25
No. KBS—EXTRA SHAFTS or Axles, with Nut, for No. KB; 9 inches Long; Weight each about $1\frac{1}{2}$ lbs. ....	.75
No. KBN—EXTRA NUTS for Shaft; Weight each about $3\frac{1}{2}$ ozs. ....	.12
	Per Set of 2
No. KBB—EXTRA AXLE BEARINGS, with Balls, for No. KB; Weight per set about 1 lb.	\$0.70
	Each
No. KBBS—EXTRA BUSHED STONES ONLY, for No. KB; $1\frac{1}{4}$ to $2\frac{1}{4}$ inches Thick; Average Diameter 19 inches; Average Weight each about 50 lbs.	\$2.50
	Packed Loose.

POWER GRINDSTONES.



HERCULES.

Wooden Frames for Power Use.

These Frames are strongly made of Seasoned Oak, braced securely in every direction and firmly Bolted together.

Fitted with Patent Detachable Fixture which enables us to ship Stone and Frame separate and have the Stone run true when the Shaft is replaced, without any returning of the Stone.

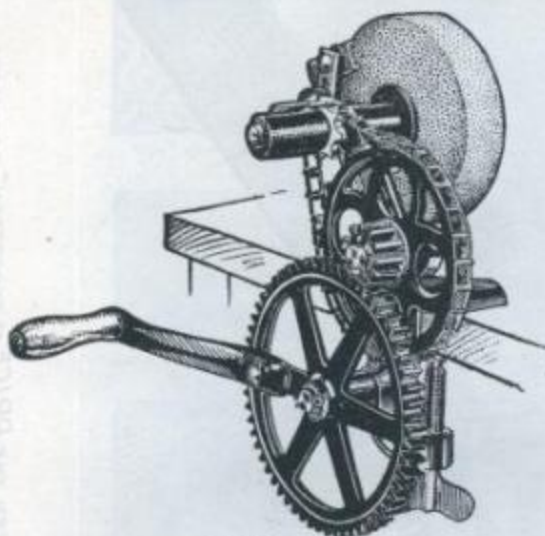
No. 5—STONE 24 INCHES IN DIAMETER; 3 INCHES THICK; Without Pulley	Each \$30.00
No. 6—STONE 30 INCHES IN DIAMETER; 4 INCHES THICK; Without Pulley	36.00
Packed Loose, Knocked Down; Weight Each about 100 lbs.	

MT



TOOL GRINDERS.

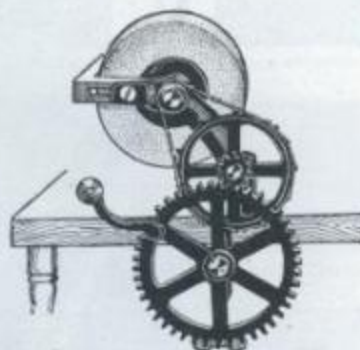
Japanned Iron Frame and Gear Wheels; Steel Axle; Adjustable Sprocket Chain; Equipped with Clamp Device that will take a Grip up to 2 inches; So arranged that any Wheel can be used in place of regular equipment.



GODFREY.

For Repairmen, Blacksmiths, Carpenters, Mechanics and Farmers.

No. G—Double Adjustable Tool Rest; Detachable Crank; Equipped with one $5\frac{1}{2} \times 1\frac{1}{4}$ inch Corundum Wheel and one $4 \times 1\frac{1}{4} \times \frac{1}{2}$ inch Fine Finishing Stone; Sprocket Wheel 6 inches in Diameter; Large Gear Wheel 5 inches in Diameter; Small Gear Wheel $1\frac{1}{2}$ inches in Diameter; Weight per dozen about 132 lbs. \$48.00
One-twelfth Dozen in a Wood Box.



MONARCH.

For Family and Mechanics' Use.

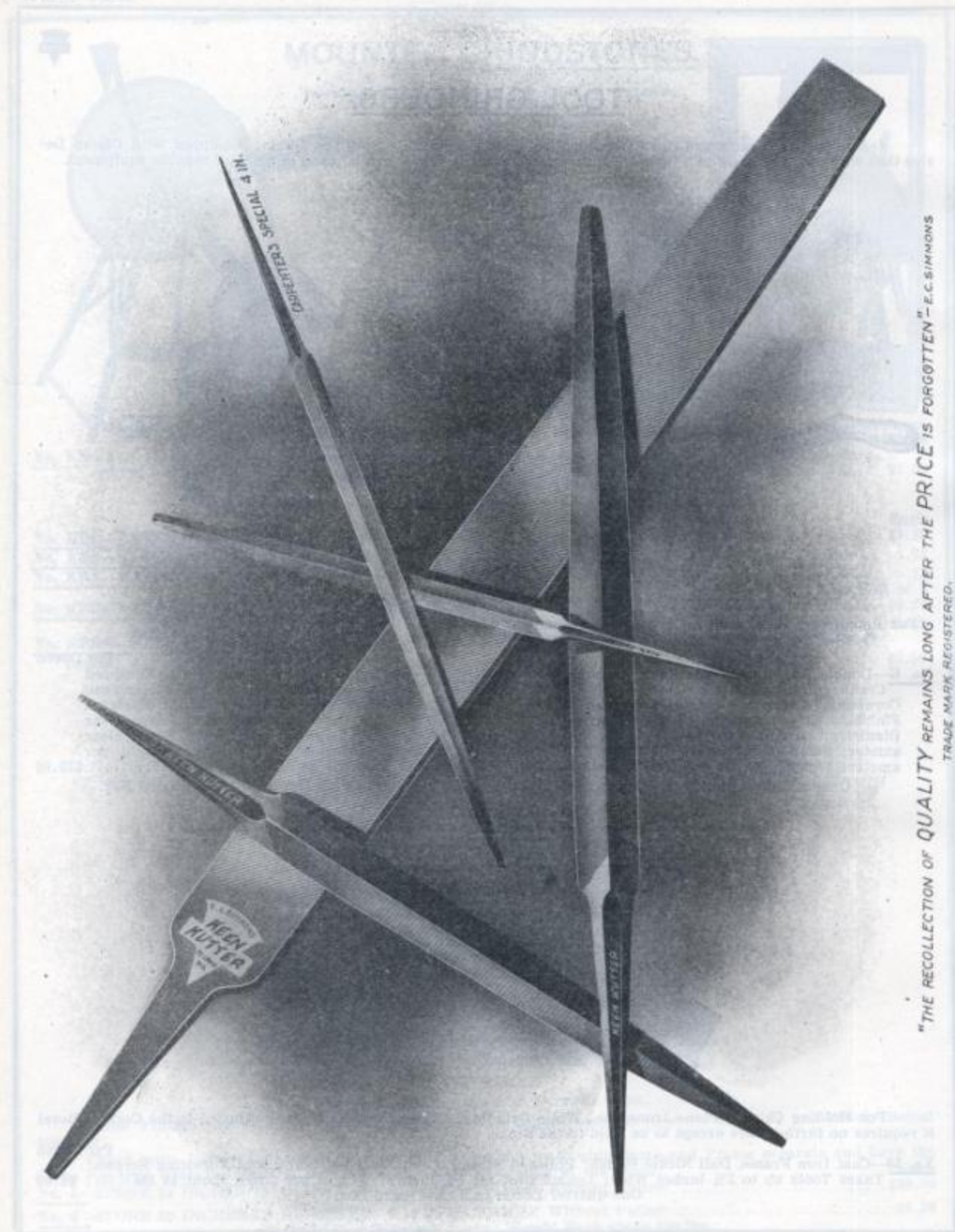
No. M—Single Adjustable Tool Rest; Equipped with one 4×1 inch Corundum Wheel and one $4 \times 1 \times \frac{1}{2}$ inch Fine Finishing Stone; Sprocket Wheel $4\frac{1}{2}$ inches in Diameter; Large Gear Wheel $3\frac{1}{2}$ inches in Diameter; Small Gear Wheel $1\frac{1}{2}$ inches in Diameter; Weight per dozen about 60 lbs. \$30.00
One-twelfth Dozen in a Cardboard Box.

CHISEL GRINDERS.



For Holding Chisels, Plane Irons, etc., While Grinding. When the Tool is once adjusted to the Correct Bevel it requires no further care except to be Held to the Stone.

No. 50—Cast Iron Frame, Dull Nickel Finish; Polished Steel Roller; Steel Set Screw and Adjusting Screws; Takes Tools up to $2\frac{3}{4}$ inches Wide; Length over all $7\frac{3}{4}$ inches; Weight per dozen about 18 lbs. \$9.00
One-quarter Dozen in a Cardboard Box.



"THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTEN" - E.C. SINNONS
TRADE MARK REGISTERED

See Following Pages for Description and Prices.



GENERAL DESCRIPTION OF FILES AND RASPS.



Rasp Coarse.



Rasp Bastard.



Rasp Second Cut.



Rasp Smooth.



Double Cut Coarse.



Double Cut Bastard.



Dbl. Cut Second Cut.



Double Cut Smooth.



Single Cut Coarse.



Single Cut Bastard.



Sin. Cut Second Cut.



Single Cut Smooth.

Files and Rasps have Three Distinguishing Features.

FIRST—THEIR LENGTH—Which is always measured exclusive of their Tang.

SECOND—THEIR KIND, OR NAME—Which has reference to the shape or style.

THIRD—THEIR CUT—Which has reference not only to the character, but also to the relative degrees of coarseness of the Teeth.

THE LENGTH—Of a File is the distance between its Heel or part of the File where the Tang begins and the point or end opposite. The Tang or portion of the File prepared for the reception of the Handle is never included in the Length. In general, the Lengths of Files bear no fixed proportion to either their Width or Thickness, even though they be of the same kind.

THE KIND—By Kind we mean the varied shapes or styles of Files which are distinguished by certain technical names, as, for instance, FLAT, MILL, HALF-ROUND, etc. The Kinds are divided, from the form of their Cross Sections into Three Geometrical Classes, namely, Quadrangular Sections, Circular Sections and Triangular Sections; Odd and Irregular Forms are collected under Miscellaneous Sections. These Sections are in turn sub-divided according to their general contour or outline, into Taper and Blunt.

TAPER—Designates a File, the Point of which is more or less reduced in size, both in Width and Thickness by a gradually narrowing Section extending from One-half to Two-thirds the Length of the File, from the Point; Custom has also established it as a short name for the Three Square Hand Saw File.

BLUNT—Designates a File that preserves its Sectional Shape throughout, from Point to Tang.

THE CUT of Files is divided, with reference to the character of the Teeth, into Single Cut, Double Cut and Rasp Cut, and with reference to the Coarseness of the Teeth into Rough, Coarse, Bastard, Second Cut, Smooth and Dead Smooth. Regarding the latter we may say very briefly that the Coarse and Bastard Cuts are used upon the coarser, heavier classes of work, while the Second Cut and Smooth are used for the finer grades and for finishing the work started by the Coarse and Bastard. The Rough and Dead Smooth are seldom called for, but correspond to the above use.

THE SINGLE CUT FILE—Is one in which a Single, Unbroken Course of Chisel Cuts is made across its Surface, arranged parallel to each other, but with a horizontal obliquity to the Central Line.

THE DOUBLE CUT FILE—Has Two Courses of Chisel Cuts crossing each other, the Second Course, with rare exceptions, being finer than the first.

RASP CUT—Differs from Single or Double Cut in the respect that the Teeth are disconnected from each other, each Tooth being made by a single pointed tool, called a punch.

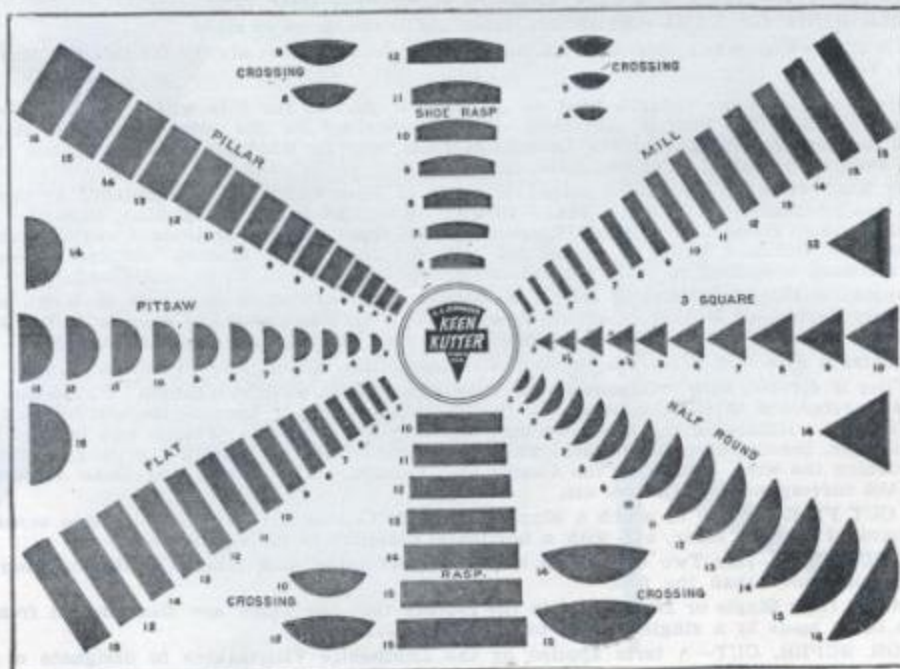
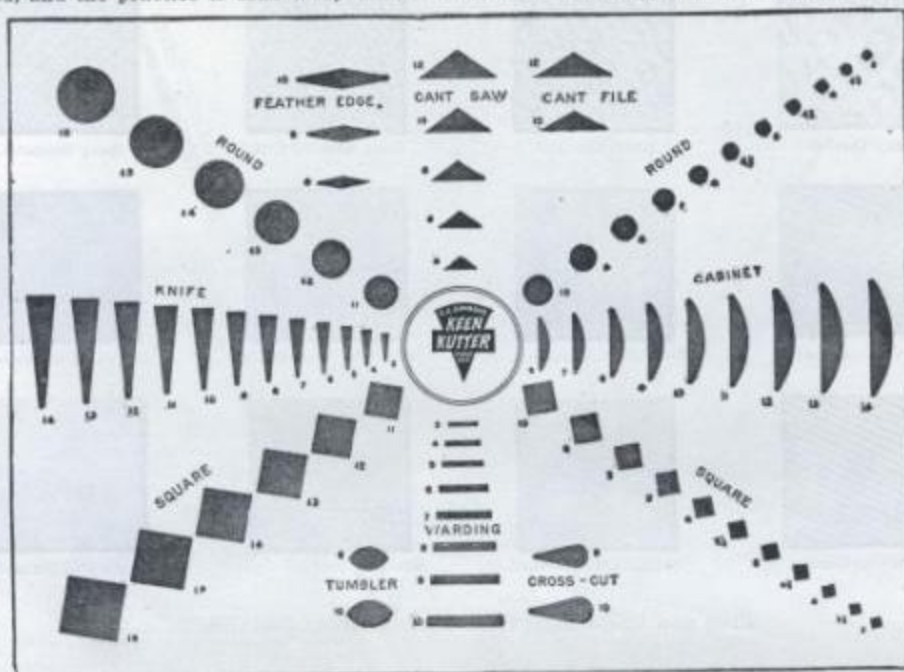
SUPERFINE, OR SUPER, CUT—A term applied by the Lancashire File-makers to designate a grade of Cut designated by us as Dead Smooth.



GENERAL DESCRIPTION OF FILES AND RASPS.—Continued.

SAFE EDGE, OR SIDE—Terms used to denote that a File has one or more of its Edges or Sides Smooth or Uncut, that it may be presented to the work without injury to that portion which does not require to be Filed.

RE-CUT OR RE-CUTTING—The Working Over of Old or Worn Out Files by the Several Processes of Annealing, Grinding out of the Old Teeth, Re-Cutting, Hardening, etc., and thus again preparing them for use. This Action is sometimes Repeated Two and even Three Times, but the economy of Re-Cutting at all is very much questioned, and the practice is done away with in most of the best appointed shops of the present day.



Showing Sectional View of Different Styles of Files.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

FILES.



KEEN KUTTER Files for Uniformity of Pattern, Perfection in Selection, Toughness in Temper and Satisfaction in Using have no equal.

KEEN KUTTER*

Forged from Highest Grade Crucible Steel; Natural Gas Tempered, which gives the Metal a peculiar Hardening and Toughness; Cut in the Latest Improved Machines; Carefully Tested and Selected.

E. C. Simmons' KEEN KUTTER* Carpenters' Special Slim Taper.

Especially designed for Filing Panel, Hack, Butchers', Scroll and other fine tooth Saws, having a special thin edge and fine cuts.

Inches	3	3½	4	4½	5	5½	6	7	8
Weight per dozen about, lbs.....	¾	¾	¾	¾	¾	¾	¾	1	1½
Per dozen	\$2.10	2.10	2.20	2.30	2.50	2.90	3.10	3.80	4.50



Regular Taper Saw, Single Cut.

Especially Designed for Filing Hand Saws.

Inches	2½	3	3½	4	4½	5	5½	6	7	8	10
Weight per dozen about, lbs.....	¾	¾	¾	¾	1	1¼	1¼	2	3	4¼	7
KEEN KUTTER*, per dozen.....	\$2.10	2.10	2.10	2.20	2.40	2.60	3.00	3.40	4.30	5.40	8.10



Slim Taper Saw, Single Cut.

Especially Designed for Filing Hand Saws.

Inches	3	3½	4	4½	5	5½	6	7	8	10
Weight per dozen about, lbs.....	¾	¾	¾	¾	¾	¾	1¼	2	3½	5½
KEEN KUTTER*, per dozen.....	\$2.10	2.10	2.20	2.30	2.50	2.90	3.10	3.80	4.50	6.40



Stubs' Pattern Saw, Double Cut to Point.

They are preferred by some in filing the fine-toothed hand and hack saws, also the metal workers' hack saws, which are considerably harder than those used upon wood.

Inches	3	3½	4	4½	5	6
Weight per dozen about, lbs.....	¾	¾	¾	¾	¾	¾
KEEN KUTTER*, per dozen.....	\$2.50	2.50	2.90	3.10	3.50	4.70



Reversible Taper Saw, Handled, Single Cut.

Especially Designed for Filing Hand Saws.

Inches, Full Length.....	7	8	9	10
Size as Regular Tapers.....	3½	4	4½	5
Weight per dozen about, lbs.....	1	1½	2	2¾
KEEN KUTTER*, per dozen.....	\$3.50	3.90	4.40	4.90

One Dozen in a Wood Box.

TRADE MARK
E. C. SIMMONS' KEEN KUTTER
REGISTERED

FILES.



Special Blunt, Single Cut.

Made Especially for Filing Very Hard Tempered Saws and are used in the Blunt Style universally.

Inches	4	4½	5	5½	6
Weight per dozen about, lbs.....	½	½	¾	¾	1
KEEN KUTTER*, per dozen.....	\$2.20	2.30	2.50	2.90	3.10



Mill Bastard.

Used principally for sharpening Mill Saws; also Mowing Machine knives and plows; in machine shops for lathe work, draw-filing, and, to some extent, finishing the several compositions of brass and bronze.

Inches	3	4	5	6	7	8	9	10	11	12	13	14	16
Weight per dozen about, lbs....	¾	1½	1	1½	2	4	4½	6	8	12	14	15	22
KEEN KUTTER*, per dozen.....	\$3.00	3.00	3.20	3.50	3.90	4.30	4.90	5.60	6.70	7.50	9.40	10.70	14.70



Mill Bastard, One Round Edge.

Inches	6	8	10	12
Weight per dozen about, lbs.....	1½	4	6	12
KEEN KUTTER*, per dozen.....	\$3.90	4.50	6.30	8.40



Mill Bastard, Two Round Edges.

Inches	6	8	10	12
Weight per dozen about, lbs.....	1½	4	6	12
KEEN KUTTER*, per dozen.....	\$4.40	5.40	7.00	9.40



Mill Second Cut.

Inches	6	8	10	12	14	16
Weight per dozen about, lbs.....	1½	3	6	12	15	22
KEEN KUTTER*, per dozen	\$4.00	4.90	6.40	8.60	12.20	16.80



Flat Bastard.

Not confined to any specific kind of work, but employed by Mechanics generally, for a great variety of purposes.

Inches	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18
Weight per dozen about, lbs....	¾	1½	1	1½	3	4	6	7¼	10	13	16	19	24	27	39
KEEN KUTTER*, per dozen.....	\$3.70	3.70	3.90	4.30	4.80	5.30	6.30	7.00	8.60	9.70	11.80	13.30	16.00	17.80	23.90

3 to 8 inch, One Dozen; 9 inch and over, One-half Dozen in a Wood Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

FILES.



Flat Smooth.

Inches	3	4	6	8	10	12	14	16
Weight per dozen about, lbs.....	1 1/4	1 1/2	1 3/4	2 1/4	3	4	5 1/2	7
KEEN KUTTER*, per dozen	\$4.70	4.70	5.30	6.60	8.70	12.10	16.70	22.30



Flat Second Cut.

Inches	6	8	10	12	14	16
Weight per dozen about, lbs.....	1 1/4	1 3/4	2 1/4	3	4	5 1/2
KEEN KUTTER*, per dozen	\$4.80	6.10	8.10	11.00	15.30	20.10



Hand Bastard, One Safe Edge.

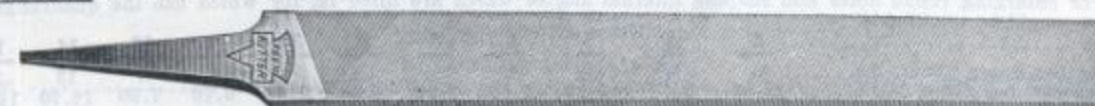
This File is preferred amongst Machinists and Engineers for finishing flat surfaces, and owing to its shape and its having one safe edge, is particularly useful where the flat file would not answer.

Inches	8	10	12	14	16
Weight per dozen about, lbs.....	5	10	15	22	36
KEEN KUTTER*, per dozen	\$5.40	7.50	10.70	15.00	20.10



Hand Second Cut, One Safe Edge.

Inches	8	10	12
Weight per dozen about, lbs.....	5	9	15
KEEN KUTTER*, per dozen	\$6.30	\$7.70	12.30



Hand Smooth, One Safe Edge.

Inches	8	10	12	14
Weight per dozen about, lbs.....	5	9	15	23
KEEN KUTTER*, per dozen	\$6.70	9.40	13.50	18.20



Half Round Bastard.

Has a wide use in the Machine Shop.

Inches	3	4	5	6	7	8	9	10	11	12	14	16
Weight per dozen about, lbs.....	1/4	1/2	1	1 1/4	2 1/4	4	5	6	9	12	17	25
KEEN KUTTER*, per dozen	\$4.80	4.80	5.40	6.10	7.00	7.50	8.50	9.10	10.70	11.80	15.50	20.60

3 to 8 inch, One Dozen; 9 inch and over, One-half Dozen in a Wood Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

FILES.



Half Round Smooth.

Has a Wide Use in the Machine Shop.

Inches	4	6	8	10	12	14	16
Weight per dozen about, lbs.....	$\frac{1}{2}$	$1\frac{1}{2}$	4	6	11	17	25
KEEN KUTTER*, per dozen	\$6.10	7.10	8.90	10.70	13.90	18.30	24.20



Half Round Second Cut.

Inches	6	8	10	12	14	16
Weight per dozen about, lbs.....	$1\frac{1}{2}$	4	6	12	17	25
KEEN KUTTER*, per dozen	\$6.70	8.30	10.10	13.00	17.00	22.50



Half Round Cabinet.

Used by Cabinet Makers and other Wood Workers generally.

Inches	10	12	14
Weight per dozen about, lbs.....	5	9	14
KEEN KUTTER*, per dozen	\$13.70	18.70	24.80



Square Bastard.

Used in almost all branches of mechanical industry, principally for enlarging apertures of a square or rectangular shape.

Inches	4	6	8	10	12	14	16	18
Weight per dozen about, lbs.....	$\frac{3}{4}$	1	$2\frac{1}{4}$	4	9	16	27	36
KEEN KUTTER*, per dozen	\$3.80	4.60	5.50	7.40	10.20	13.90	18.70	25.10



Round Bastard.

For enlarging round holes and shaping internal angles which are filled in, for which use the quadrangular section would be unsuitable.

Inches	3	4	5	6	7	8	10	11	12	14	16
Weight per dozen about, lbs.....	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$3\frac{1}{4}$	6	7	13	21
KEEN KUTTER*, per dozen	\$3.00	3.00	3.20	3.50	3.90	4.30	5.60	6.70	7.50	10.70	14.70

3 to 8 inch, One Dozen; 10 inch and over, One-half Dozen in a Wood Box.



Pit Saw.

For filing the teeth of what are known as pit and frame saws.

Inches	6	8
Weight per dozen about, lbs.....	$1\frac{1}{2}$	$3\frac{1}{2}$
KEEN KUTTER*, per dozen	\$6.10	7.50



Cant Saw.

Used principally in filing Cross Cut Saws having M shaped teeth.

Inches	5	6	8	16
Weight per dozen about, lbs.....	1	$1\frac{1}{2}$	3	5
KEEN KUTTER*, per dozen	\$4.70	5.40	6.40	8.70

One Dozen in a Wood Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

FILES.



Cant Safe Back.

KEEN KUTTER*, 6 inch, Suitable for Filing No. 120 Acme Saws Per Dozen \$5.40
Weight per Dozen about 1½ lbs.



Great American Cross Cut Saw.

Especially Designed for Filing Cross Cut Saws.

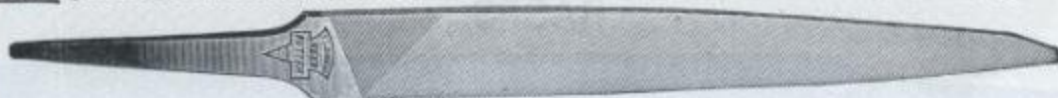
Inches	7	8	10
Weight per dozen about, lbs.....	2	4	6½
<u>KEEN KUTTER</u> *, per dozen	\$7.00	7.50	9.10



Band Saw Blunt Slim.

Especially Designed for Filing Band Saws.

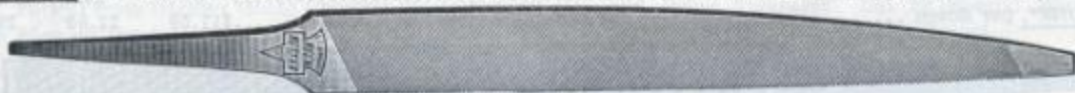
Inches	5	6	8
Weight per dozen about, lbs.....	1	1½	3
<u>KEEN KUTTER</u> *, per dozen	\$3.20	3.90	5.30



Knife Bastard.

Resemble somewhat when finished the blade of a knife; in limited quantities are in pretty general use in work for which their shape adapts them.

Inches	4	5	6
Weight per dozen about, lbs.....	¾	1	1¼
<u>KEEN KUTTER</u> *, per dozen	\$5.40	6.10	6.90



Gin Saw, One Safe Edge.

Used for filing cotton gin saws.

Inches	3½	4
Weight per dozen about, lbs.....	½	¾
<u>KEEN KUTTER</u> *, per dozen	\$4.80	4.80



Warding, Bastard Cut.

Considerably used by Jewelers and Machinists; but more especially by Locksmiths, in filing the ward notches in keys.

Inches	3	4	5	8
Weight per dozen about, lbs.....	¾	1½	½	1
<u>KEEN KUTTER</u> *, per dozen	\$4.00	4.00	4.50	4.90

One Dozen in a Wood Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

FILES.



Warding, Second Cut.

KEEN KUTTER Warding Files are made extra thin and strong, and especially adapted for their work.

Inches	3	4	5	6
Weight per dozen about, lbs.....	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	1
KEEN KUTTER*, per dozen	\$4.80	4.80	5.30	5.90



Half Round Wood Files.

Used by Wood Workers generally and occasionally upon the coarser kinds of brass work.

Inches	10	12
Weight per dozen about, lbs.....	6	10
KEEN KUTTER*, per dozen	\$9.10	11.80

One Dozen in a Wood Box.

RASPS.



Half Round Cabinet Rasps.

Used by Cabinet Makers and other Wood Workers generally.

Inches	10	12	14
Weight per dozen about, lbs.....	6	10	14
KEEN KUTTER*, per dozen	\$17.50	22.80	29.60



Half Round Wood Rasps.

Used principally by Wheelwrights and Carriage Builders and to some extent by Plumbers and Marbleworkers.

Inches	10	12	14
Weight per dozen about, lbs.....	8	10	18
KEEN KUTTER*, per dozen	\$13.70	18.70	24.80



Flat Wood Rasps.

For Wheelwrights and Carriage Makers.

Inches	10	12	14
Weight per dozen about, lbs.....	8	12	17
KEEN KUTTER*, per dozen	\$12.80	17.50	23.20

One-half Dozen in a Wood Box.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

RASPS.



Half Round Shoe Rasp.

Used by Shoemakers generally.

KEEN KUTTER* , 8 inch	Per Dozen	Nicholson's , 8 inch	Per Dozen
	\$10.10		\$10.10



Used by Shoemakers generally.

KEEN KUTTER* Flat Shoe Rasps, with Two Safe Edges, 8 inch; Weight per dozen about 5 lbs.	Per Dozen
One-half Dozen in a Wood Box.	\$10.10



KEEN KUTTER* Plain Horse Rasps.

Used by Horseshoers.

Forged from Highest Grade Crucible Steel; Natural Gas and Brine Tempered; Cut by Special Machines; Teeth have an Irregularity which gives Great Cutting Capacity and Long Life; Selected and Tested.

Inches	10	12	14	15	16
Weight per dozen about, lbs.	10	16	22	24	29
Per dozen	\$9.40	12.80	17.80	20.90	24.40



KEEN KUTTER* Plain Slim, Extra Light Horse Rasps.

Length, inches	16	18
Width, inches	1½	1½
Thickness, inches	5/16	5/16
Weight per dozen about, lbs.	25	30½
Per dozen	\$10.00	12.00

NOTE.—All Horse Rasps made regular, one side all Rasp, reverse side all File.

One-half Dozen in a Wood Box.



FILES.

NICHOLSON'S.

Forged from Tool Steel, Tempered, Tested and Selected.

Square Bastard, Blunt.

Inches	4	5	6	8	10	12	14	16	18	20
Weight per dozen about, lbs.	$\frac{5}{16}$	$\frac{9}{16}$	1	2 $\frac{1}{2}$	4 $\frac{1}{2}$	10 $\frac{1}{2}$	19	29 $\frac{1}{2}$	44 $\frac{1}{2}$	75
Per dozen	\$4.10	4.60	5.10	6.60	9.10	12.50	16.90	22.50	29.70	39.36

Round Bastard, Blunt.

Inches	4	5	6	8	10	12	14	16	18	20
Weight per dozen about, lbs.	$\frac{5}{16}$	$\frac{9}{16}$	$\frac{15}{16}$	2 $\frac{1}{4}$	3 $\frac{15}{16}$	8 $\frac{5}{16}$	14 $\frac{1}{2}$	23 $\frac{1}{2}$	35 $\frac{1}{4}$	54
Per dozen	\$3.20	3.50	3.90	4.90	6.70	9.40	13.10	18.20	24.60	32.88

Three Square, Bastard.

Inches	4	5	6	7	8	9	10	12	14	16	18
Weight per dozen about, lbs.	$\frac{3}{4}$	1 $\frac{1}{4}$	2 $\frac{1}{4}$	2 $\frac{15}{16}$	4 $\frac{5}{16}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$	13	20	27 $\frac{3}{16}$	38 $\frac{1}{2}$
Per dozen	\$4.80	5.40	6.10	7.00	7.50	8.50	9.10	11.80	15.50	20.60	27.50

Crossing Bastard.

Inches	4	5	6	8	10	12	14	16
Weight per dozen about, lbs.	$\frac{5}{8}$	1	1 $\frac{7}{16}$	4 $\frac{1}{2}$	8 $\frac{3}{16}$	13 $\frac{1}{4}$	20 $\frac{1}{2}$	30 $\frac{1}{2}$
Per dozen	\$6.10	7.00	7.50	9.10	11.80	15.50	20.60	27.50

Tumbler Bastard.

Inches	4	5	6	8	10
Weight per dozen about, lbs.	$\frac{5}{8}$	1	1 $\frac{1}{2}$	2 $\frac{1}{16}$	4 $\frac{1}{2}$
Per dozen	\$6.10	7.00	7.50	9.10	11.80

Feather Edge Bastard.

Inches	4	5	6	8	10	12
Weight per dozen about, lbs.	$\frac{3}{4}$	1 $\frac{3}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	6 $\frac{11}{16}$	11 $\frac{1}{2}$
Per dozen	\$6.10	7.00	7.50	9.10	11.80	15.50

Square, Round, Three Square, Tumbler, Feather Edge Bastard, 4 to 10 inch, One Dozen; 12 inch and over, One-half Dozen in a Cardboard Box.

Crossing Bastard, 4 to 8 inch, One Dozen; 10 inch and over, One-half Dozen in a Cardboard Box.

FILES.

NICHOLSON'S "XF" Swiss Pattern.

Forged from Tool Steel, Tempered, Tested and Selected. The term "XF" signifies Extra Fine. In general, it applies to that class of Files used by Jewelers, Watch and Tool Makers and for similar Fine Work, in which the best Material and Superior Workmanship are required. The cut is designated by numbers ranging from No. 00, the Coarsest, to No. 8, the Finest.

No. 0 Cut.
Hand.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$2.80	3.00	3.15	4.15	4.35	4.80	6.40	7.00	9.55	12.30

Cut Nos. 3-4.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$2.90	3.15	3.30	4.25	4.50	5.00	6.60	7.20	9.90	12.60

Cut No. 5.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$3.00	3.20	3.40	4.40	4.70	5.20	6.80	7.60	10.50	13.60

Cut No. 6.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$3.15	3.25	3.55	4.60	5.00	5.40	7.20	8.00	11.10	14.00

Cut No. 7.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$3.30	3.55	3.75	4.80	5.20	5.80	7.60	8.40	11.50	14.70

Cut No. 8.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$3.45	3.75	3.95	5.00	5.40	6.20	8.00	9.15	12.30	15.50

No. 0 Cut.
Equalling.

All Cuts.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.50	2.80	3.20	4.20	4.55	4.90	6.10	6.90	10.00

3 to 6 inch, One Dozen; 7 inch and over, One-half Dozen in a Cardboard Box.

No. 0 Cut.
Warding.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.55	2.80	3.15	4.05	4.20	4.80	6.10	6.80	9.00

Cut Nos. 3-4.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.60	2.90	3.30	4.20	4.40	5.00	6.40	7.20	9.60

Cut Nos. 5-6.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.70	3.00	3.45	4.35	4.60	5.20	6.80	7.60	10.00

Cut Nos. 7-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.80	3.15	3.60	4.55	4.80	5.40	7.20	8.00	10.40

One Dozen in a Cardboard Box.



FILES.

NICHOLSON'S "XF" Swiss Pattern.

Forged from Tool Steel, Tempered; Tested and Selected. The term "XF" signifies extra fine. In general, it applies to that class of Files used by Jewelers, Watch and Tool Makers and for similar fine work, in which the best material and superior workmanship are required. The cut is designated by numbers ranging from No. 00, the coarsest, to No. 8, the finest.



No. 0 Cut.

Pillar.

Cut Nos. 00-2.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.60	2.75	2.95	3.85	4.00	4.30	5.50	6.50	8.70

Cut Nos. 3-4.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.65	2.80	3.00	3.90	4.15	4.40	5.70	6.70	8.90

Cut Nos. 5-6.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.70	2.90	3.10	4.00	4.25	4.55	6.00	6.90	9.30

Cut Nos. 7-8.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.80	3.00	3.20	4.15	4.45	4.75	6.15	7.10	9.70



No. 0 Cut.

Pillar, Narrow.

Cut Nos. 00-2.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.60	2.75	2.95	3.85	4.00	4.30	5.50	6.50	8.70

Cut Nos. 3-4.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.65	2.80	3.00	3.90	4.15	4.40	5.70	6.70	8.90

Cut Nos. 5-6.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.70	2.90	3.10	4.00	4.25	4.55	6.00	6.90	9.30

Cut Nos. 7-8.

Inches	<u>3</u>	<u>3½</u>	<u>4</u>	<u>4½</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>
Per dozen	\$2.80	3.00	3.20	4.15	4.45	4.75	6.15	7.10	9.70

3 to 6 inch One Dozen; 7 inch and over, One-half Dozen in a Cardboard Box.

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FILES.

NICHOLSON'S "XF" Swiss Pattern.

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No. 4 Cut.

Barrette.Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.80	3.25	3.70	4.60	5.25	6.20	7.95	9.15	12.30

Cut Nos. 3-5.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.85	3.35	3.75	4.75	5.40	6.35	8.15	9.35	12.50

Cut Nos. 6-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.95	3.40	3.85	4.95	5.60	6.55	8.35	9.55	12.80



No. 0 Cut.

Crochet.Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.80	3.20	3.50	4.40	4.60	5.40	7.20	8.35	11.60

Cut Nos. 3-5.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$3.00	3.40	3.70	4.70	4.95	5.70	7.60	8.75	12.00

Cut Nos. 6-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$3.20	3.60	3.90	5.00	5.25	6.00	8.00	9.15	12.45

Slitting.

All Cuts.

Inches	3	3½	4	4½	5	6
Per dozen	\$3.15	3.50	4.00	5.20	5.70	6.80

3 to 6 inch, One Dozen; 7 inch and over, Half Dozen in a Cardboard Box.

FILES.



NICHOLSON'S "XF" Swiss Pattern.

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No. 0 Cut.

Knife.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.90	3.30	3.60	4.60	4.90	5.40	7.20	8.80	10.30

Cut Nos. 3-4.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$3.00	3.35	3.70	4.75	5.10	5.80	7.60	9.20	10.70

Cut Nos. 5-6.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$3.05	3.45	3.80	4.95	5.30	6.20	8.00	9.60	11.10

Cut Nos. 7-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$3.15	3.55	3.90	5.15	5.50	6.60	8.40	10.00	11.50

3 to 8 inch, One Dozen; 10 inch, One-half Dozen in a Cardboard Box.



No. 0 Cut.

Crossing.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.80	3.25	3.70	4.70	5.00	5.60	7.40	8.50	11.50

Cut Nos. 3-5.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.85	3.30	3.80	4.95	5.40	6.10	8.10	9.25	14.30

Cut Nos. 6-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.95	3.40	4.00	5.20	5.80	6.55	8.75	10.10	16.90



No. 0 Cut.

Half Round.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$2.90	3.05	3.20	4.10	4.35	5.00	6.80	7.80	10.70	12.90

Cut Nos. 3-5.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$3.00	3.15	3.70	4.65	4.95	5.60	7.60	8.75	13.80	16.90

Cut Nos. 6-8.

Inches	3	3½	4	4½	5	6	7	8	10	12
Per dozen	\$3.15	3.60	4.20	5.10	5.30	6.15	8.20	9.55	16.20	19.30

3 to 6 inch, One Dozen; 7 inch and Over, One-half Dozen in a Cardboard Box.

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FILES.



NICHOLSON'S "XF" Swiss Pattern.

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No. 0 Cut.

Square Slim.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.25	2.50	2.80	3.70	3.85	4.40	5.65	6.40	7.20

Cut Nos. 3-5.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.25	2.50	2.95	3.75	3.95	4.55	5.85	6.80	8.00

Cut Nos. 6-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.25	2.50	3.05	3.90	4.05	4.70	6.00	7.20	8.80

No. 0 Cut.

Round Slim.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.05	2.25	2.50	3.25	3.35	3.70	4.85	5.65	7.60

Cut Nos. 3-5.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.05	2.25	2.60	3.35	3.50	3.90	5.25	6.00	8.35

Cut Nos. 6-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.05	2.25	2.65	3.50	3.70	4.10	5.65	6.40	9.55

One Dozen in a Cardboard Box.

No. 0 Cut.

Three Square Slim.

Cut Nos. 00-2.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.80	3.05	3.30	4.15	4.35	5.00	6.60	7.80	9.15

Cut Nos. 3-5.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$2.95	3.15	3.40	4.25	4.45	5.10	6.90	8.15	9.55

Cut Nos. 6-8.

Inches	3	3½	4	4½	5	6	7	8	10
Per dozen	\$3.05	3.30	3.50	4.40	4.60	5.25	7.20	8.55	9.90

3 to 6 inch, One Dozen; 7 inch and over, One-half Dozen in a Cardboard Box.

FILES.

NICHOLSON'S "XF" Swiss Pattern.

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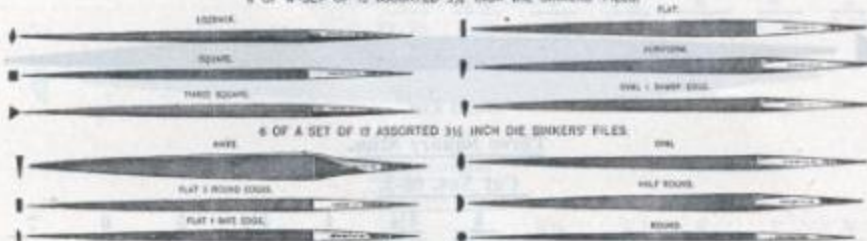
SET OF 4½ INCH ROUND HANDLE NEEDLE FILES



Needle Files in Sets of 12 Different Shapes or Assorted.

Inches	4	4½	5½	6½
Per set of 12	\$1.90	1.90	2.10	2.25

6 OF A SET OF 12 ASSORTED 3½ INCH DIE SINKERS' FILES.



Die Sinkers in Sets of 12.

Inches	3½
Per set of 12 assorted shapes	\$2.80

One Set in a Cardboard Box.

FILES.

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Screw Head, Plain.

Screw Head, Tanged.

SCREW HEAD FILES.

Plain or Without Tang.

With Tang.

Inches	3	Inches	3
Per dozen	\$2.70	Per dozen	\$3.00

BROACH FILES		STEEL WIRE GAUGE		FROM 40 TO 65	
SECTION	GAUGE	SECTION	GAUGE	SECTION	GAUGE
•	40	•	50	•	47
•	45	•	52	•	48
•	48	•	54	•	49
•	50	•	56	•	50
•	52	•	58	•	51
•	54	•	60	•	52
•	56	•	62	•	53
•	58	•	64	•	54
•	60	•	66	•	55
•	62			•	56
•	64			•	57
•	66			•	58

Broach Files.

Twist Drill and Steel Wire Gauge	40 to 65
Per dozen (all cuts)	\$1.65

Ratchet File.

Inches	3
Per dozen	\$2.70



Square Handle Needle or Escapement Files.

Inches	3 1/2
Per dozen (12 assorted shapes)	\$2.35

Left Hand Pivot.

Right Hand Pivot.

Burnisher.

PIVOT FILES OR BURNISHERS.

Pivot or Burnisher with Tang.

Pivot or Burnisher with Handle.

Double End Pivot.

Inches	2 1/4	Inches	2 1/4	Inches	2 1/4
Per dozen	\$3.50	Per dozen	\$4.80	Per dozen	\$7.00

One Dozen in a Cardboard Box.

AUGER BIT FILES.

Made especially for Sharpening Auger Bits.

Per Dozen

- No. M**—Forged from Tool Steel, Tempered and Polished; One End Cut on Edges; Reverse End Cut on Sides only; Length 6½ inches; Length of Cutting Ends 1½ inches; Width ¼ inch, Tapered to Point; Weight per dozen about ¾ lb. \$2.50

One Dozen in a Cardboard Box.

HORSE TOOTH FILES.

STANDARD.

Per Dozen

- No. 1**—Polished Malleable Iron Frame and Shank; Stained Hardwood Handle; Polished Steel Ferrule; Shank extends entirely through Handle and Riveted with Washer at End; File Forged from Tool Steel, Tempered; Double File Cut on one Side, Rasp Cut on Reverse Side; Length of File 3¼ inches; Width 1 inch; Length over all 19 inches; File can be Reversed in Frame and is secured with Two Flush-Head Steel Set Screws in Back; Weight per dozen about 14 lbs. \$29.00

One-fourth Dozen in a Cardboard Box.

EXTRA FILES.

Per Dozen

- No. 1E**—EXTRA FILES, to fit No. 1 Horse Tooth Files; Weight per dozen about 1¼ lbs. \$7.00

One Dozen in a Cardboard Box.

SIDE FILES.

Per Dozen

- No. SF**—Forged from Tool Steel; Single Cut on Both Sides; Length 4½ inches; Width at Ends 1¼ and 1¼ inches; Tapered to fit No. F Side File Frames; Weight per dozen about 4 lbs. \$4.80

One Dozen in a Cardboard Box.

SIDE FILE FRAMES.

Per Dozen

- No. F**—DISSTON'S, Japanned Cast Iron Frame; Japanned Malleable Iron Set Screws and Jamb Nuts; Width at Face 3½ inches; Width in Center 2 inches; Length of Frame over all 9¼ inches; Weight per dozen about 20 lbs. \$9.00

One-twelfth Dozen in a Cardboard Box.

The Side File is used for the purpose of regulating Saw Teeth after they have been set. It is impossible to set a Saw so that some of the teeth will not extend or be bent over a little more than others, and thus make rough lumber. By the use of this instrument all the teeth are made even. The File may be so adjusted by means of the set screws in the Frame as to conform to any width of set desired. The Jamb-nuts are for the purpose of securing the set-screws in the desired position.

FILE CLEANERS.

Per Dozen

- No. 1**—Hardwood Back and Handle, Varnished; Hardened Steel Wire Brush on One Side only, attached to Leather Face; Length of Face 4¼ inches; Width 1½ inches; Length of Wires ¼ inch; Length over all 10 inches; Steel Scraper 4 inches Long, ¼ inch Wide at Point, accompanies each Cleaner; Weight per dozen about 4 lbs. \$2.75



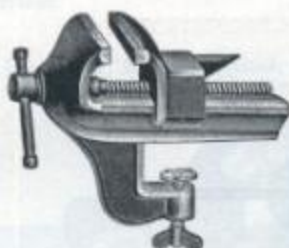
Per Dozen

- No. 2**—Hardwood Frame and Handle, Varnished; Hardened Steel Wire Brush on One Side, attached to Leather Face; Black Bristle Brush on Reverse Side, inserted in Frame; Length of Faces 4¼ inches; Width 1½ inches; Length of Wires ¼ inch; Length of Bristles ½ inch; Length over all 10 inches; Steel Scraper 4 inches Long, ¼ inch Wide at Point, accompanies each Cleaner; Weight per dozen about 5 lbs. \$4.80

One-half Dozen in a Cardboard Box.

-346- **VICES.**

BONNEY'S.



No. 1B.

No. 1B—With Plain Clamp Screw, Plain Jaws;
 WIDTH OF JAWS 1½ INCHES; Jaws
 Open 2¼ inches; Length Closed 4¼ inches;
 Weight per dozen about 17 lbs. \$3.75

No. 2B—With Plain Clamp Screw, Plain Jaws;
 WIDTH OF JAWS 2 INCHES; Jaws Open
 2½ inches; Length, Closed, 5¼ inches;
 Weight per dozen about 35 lbs. 6.50



No. 3B.

Per Dozen

No. 3B—WITH BUTTON End Clamp Screw;
 WIDTH OF JAWS 2¼ INCHES; Jaws
 Open 3¼ inches; Length, Closed, 6 inches;
 With Patent Swivel Jaw Attachment;
 Weight per dozen about 36 lbs. \$12.00

No. 4B—WITH LARGE BUTTON End, Clamp
 Screw, Plain Jaws; WIDTH OF JAWS 2¼
 INCHES; Jaws Open 3¼ inches; Length,
 Closed, 6¼ inches; Weight per dozen about
 50 lbs. 16.50

Packed Loose.

Per Set

No. BNS—BONNEY VISES, as described above, in Sets,
 Mounted on Stand 16¼ inches High, 10 inches
 Wide, 18 inches Long; Stand has Japanned Cast Iron
 Sides or Leg Pieces, Cast Iron Top Plate and Two
 Hardwood Cross Pieces or Shelves; Set consists of:
 3 only No. 1B, 4 only No. 2B, 2 only No. 3B, 2 only
 4B and 1 only No. 7B; Weight per set complete about
 42 lbs. \$12.00

No. 7B Vises are the same size and description as No.
 4B, except with Steel Faced Jaws and Swivel Jaw Attachment.
 One Set in a Wood Box.



No. BNS.

HAND VISES.



No. 140.

STANDARD.

Black Enamelled Mal-
 leable Iron Hinged
 Jaws; Checkered Face;
 Polished Head; Adjust-
 ed by Steel Bolt, with
 Wing Nut, Steel Spring
 between Jaws.



No. 144.

No. 140—WITHOUT HANDLE.

Length, inches.....	3½	4
Width of Jaws, inches.....	1½	1¾
Weight per dozen about, lbs.....	3	3
Per dozen	\$6.00	6.50

No. 144—WITH 4¼ INCH BLACK ENAMELED HARD-
 WOOD HANDLE.

Length, inches.....	3½	4
Width of Jaws, inches.....	1½	1¾
Weight per dozen about, lbs.....	6	6
Per dozen.....	\$8.00	8.50

One-half Dozen in a Cardboard Box.



ALFORD'S.

Forged Steel Nickel Plated Head, Jaws, Double Acting
 Reverse Threaded Screw, and Cross-Bar; Hollow
 Polished Cocobolo Handle 4¼ inches Long, with Screw
 Head; Containing two Awns, two Chisels, one Reamer
 and one Screw Driver Bit, all Polished Steel 1¼ inches
 Long; also one Washer Cutter Head, with Adjustable
 Steel Points; Handle is interchangeable with a Nickel
 Plated Steel Bit Shank, both Screwing into Head at Bot-
 tom or either side as desired.

Per Dozen

No. 1—WITH TOOLS; 1¼ inch Checkered and
 Hardened Jaws; Length over all 7 inches;
 Weight per dozen about 12 lbs. \$42.00



HAND VISES.



LOWELL PATTERN.

No. 50—Soft Steel, with Hardened Jaws; Japanned Finish, Octagon Handle; Hole through Handle for Holding Wire; Holds $\frac{3}{16}$ inch and Smaller; Length over all $5\frac{1}{2}$ inches; Weight per dozen about $6\frac{1}{4}$ lbs. \$18.00

Per Dozen

One-twelfth Dozen in a Cardboard Box.

PIN VISES.



No. 5— $4\frac{1}{4}$ inches Long; Steel, with Hardened Jaws; Ebony Fluted Handle; Blued Finish Chucks; Holds $\frac{1}{16}$ inch and Smaller; Weight per dozen about $\frac{1}{4}$ lb. \$6.00

Per Dozen

One-half Dozen in a Cardboard Box.



No. 40— $4\frac{1}{2}$ inches Long; Steel, with Hardened Jaws; Polished; Holds Drills $\frac{3}{16}$ inch and Smaller; Holds Taps $\frac{1}{4}$ inch and Smaller; Octagon Handle, may be Clamped in Vise; Cross Hole in Handle into which a Pin may be inserted, making a "T" Handle Tap Wrench; Weight per dozen about $4\frac{1}{4}$ lbs. \$15.00

Per Dozen

One-twelfth Dozen in a Cardboard Box.



Made of Steel, Nickel Plated throughout; Jaws Drop Forged; Jaws Open $\frac{1}{4}$ inch; Hole through Handle Lengthwise, allowing Wire to pass through.

No. 3— $3\frac{1}{2}$ INCHES LONG; Weight per dozen about $\frac{3}{4}$ lbs. \$12.00

Per Dozen

No. 4— $4\frac{1}{2}$ INCHES LONG; Weight per dozen about $1\frac{1}{2}$ lbs. 15.00

One-half Dozen in a Cardboard Box.

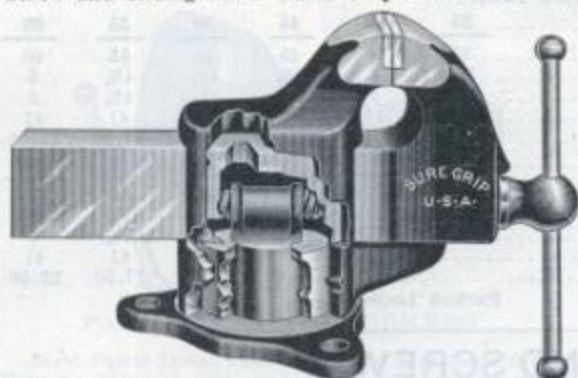
TRADE MARK;
"SURE GRIP,"
REGISTERED.

-346A-

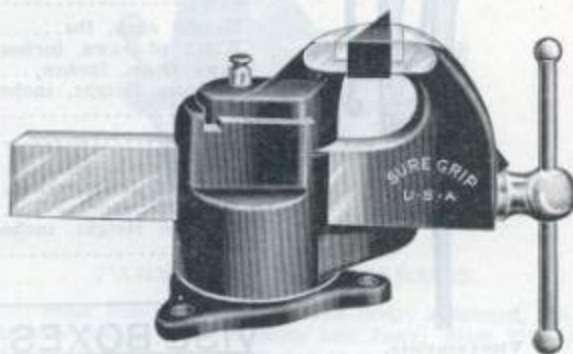
VICES.

SURE GRIP®.

Cast Iron Body, Extra Finished; Dull Black Lacquer, with Extra Polished Slide and Jaws; Polished Steel Screw and Sliding Lever Handle; Jaws are faced with 1x $\frac{3}{4}$ inch Best Tool Steel and are Checkered.



No. SG4.



No. SG20.

Machinists', Automatic Swivel Base.

Body of Vise Rotates on Milled Iron Column, forming part of Base Plate, and the Rotation is Stopped Automatically when the work is Fastened in the Jaws. This Tightening is accomplished by the Friction of a Malleable Iron Nut Tightened against the Base Column by the Action of the Main Screw, Automatically, when the Jaws are Tightened up. There are no Extra Screw Levers or Pins to break or wear out. A Mechanic will do 20 per cent more work on account of this Automatic Swivel Lock, as the entire Adjustment is by means of the Lever Handle in Front. The Lines of Construction of Sure Grip Vises are Graceful and Strong, not a pound of Material is wasted.

With Parallel Jaws.

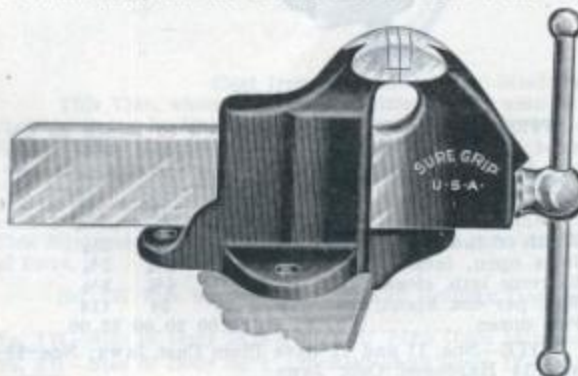
Nos.	SG1	SG2	SG3	SG4	SG5	SG6	SG7	SG8	SG9
Width of Jaw, inches	1 $\frac{1}{2}$	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5 $\frac{1}{4}$	6	7
Jaws Open, inches	2	2 $\frac{1}{2}$	4	5	6	8	9	11	12
Extreme Length, Closed, in.	6 $\frac{7}{8}$	10 $\frac{1}{2}$	12	15	17 $\frac{1}{2}$	20 $\frac{3}{4}$	24 $\frac{1}{8}$	27 $\frac{1}{4}$	30 $\frac{1}{2}$
Weight each about, lbs.	3	6	20	33	56	75	120	140	220
Each	\$6.00	7.50	9.50	11.00	13.50	16.50	24.00	36.00	45.00

With Self-Adjusting Rear Jaw, may be Made Stationary by Inserting a Pin.

Nos.	SG20	SG21	SG22	SG23	SG24	SG25
Width of Jaw, inches	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5 $\frac{1}{4}$	6	7
Jaws Open, inches	5	6	8	9	11	12
Extreme Length, Closed, inches	15 $\frac{1}{4}$	17 $\frac{1}{2}$	21 $\frac{1}{4}$	25 $\frac{1}{8}$	27 $\frac{1}{2}$	30
Weight each about, lbs.	44	66	85	135	156	238
Each	\$13.00	16.00	19.50	28.00	38.00	54.00

Machinists', Stationary Base, Parallel Jaws.

Body of Vise and Base are in One Piece, without the Swivel Action described on Nos. SG1 and SG20 series. The Material, also the Beauty and Strength of the design, are the same as on the Swivel Bottom Styles.



No. SG61.

Nos.	SG61	SG62	SG63
Width of Jaws, inches	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$
Jaws Open, inches	5	6 $\frac{1}{2}$	7 $\frac{1}{2}$
Extreme Length, Closed, inches	14 $\frac{1}{4}$	19 $\frac{1}{2}$	20
Weight each about, lbs.	26	38	55
Each	\$6.50	8.50	10.00

Nos.	SG64	SG65	SG66	SG67
Width of Jaws, in.	5 $\frac{1}{4}$	6	7	8
Jaws Open, in.	8 $\frac{1}{2}$	11	12	12 $\frac{1}{2}$
Ex. Length, Closed, in.	23 $\frac{1}{4}$	24 $\frac{3}{4}$	28 $\frac{5}{8}$	31 $\frac{1}{2}$
Weight each about, lbs.	80	127	185	230
Each	\$15.50	25.00	30.00	45.00

One in a Wood Box, except Sizes Marked (#)

Packed Loose.

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VICES.**SOLID BOX; BLACKSMITHS'.**

Forged Steel Body, Jaws and Hinge Plate; Japanned Finish; Malleable Iron Bench Plate; Malleable Box, Japanned; Polished Steel Screw and Sliding Lever Handle; Steel Spring between Jaws.

Nos.	35	40	45	50	55	60
Weight each, lbs.	35	40	45	50	55	60
Width of Jaws, inches	3 3/4	4	4 1/4	4 1/2	4 3/4	5
Jaws Open, inches	3 3/4	4	4 1/4	4 1/2	4 3/4	5
Extreme Height, inches	40	41	41	41	41	41
Each	\$10.00	10.50	11.00	11.50	12.00	13.00
Nos.	65	70	75	80	100	
Weight each, lbs.	65	70	75	80	100	
Width of Jaws, inches	5	5 1/4	5 1/2	5 3/4	6	
Jaws Open, inches	5	5 1/4	5 1/2	5 3/4	6	
Extreme Height, inches	41	41	41	41	41	
Each	\$14.00	15.00	16.00	17.50	22.00	

Packed Loose.



Vise Complete.

VICE BOXES AND SCREWS.

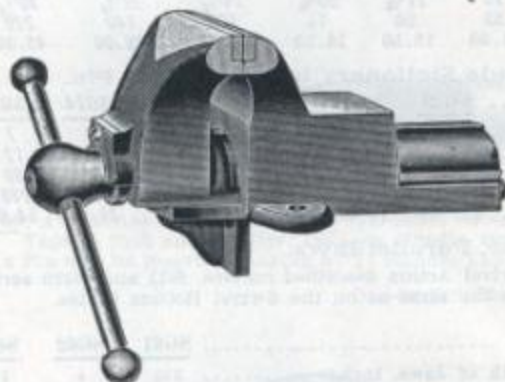
Extra Malleable Boxes, with Steel Screw and Sliding Lever handle for Solid Box Vises.

Nos.	1	1 1/2	2	3	4
To Fit Vises, Nos.	35 & 40	45 to 55	60 to 75	80 to 95	100 to 125
Length over all, inches	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2
Weight each about, lbs.	10	12	14	16	18
Each	\$3.50	4.00	4.00	4.50	7.00

Packed Loose.



Showing Extra Box and Screw.

VICES.**FARMERS' OVAL SLIDE.**

To Screw to Bench; Cast Iron, Japanned Finish, with Polished Steel Faced Jaws, Polished Steel Screw and Sliding Lever Handle.

Nos.	F30	F31	F33	F34
Width of Jaws, inches	2 1/2	3	3 1/2	4
Jaws open, inches	3 3/4	4	4	4
Extreme length, closed, inches	11 1/2	13	15	16
Weight each about, lbs.	8 1/2	13	22	28
Each	\$2.50	3.00	4.75	6.50

Packed Loose.

**PHOENIX.**

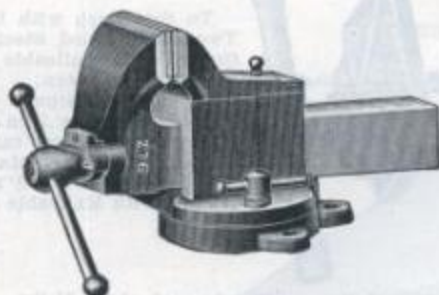
WITH ANVIL; To Clamp or Screw to Bench as desired; Cast Iron, Japanned, with Polished Slide, Jaws and Anvil Face; Polished Steel Screw and Sliding Lever Handle.

Nos.	11	12	13	14
Width of Jaws, inches	1 1/2	1 3/4	2	2 1/2
Jaws open, inches	1 3/4	2	2 1/4	2 3/4
Extreme lgth. closed, in.	4 1/2	5 1/2	6 1/4	8 1/2
Wgt. per doz. about, lbs.	18	30	54	114
Per dozen	\$7.00	13.00	20.00	32.00

NOTE—Nos. 11 and 12 have Plain Cast Jaws; Nos. 13 and 14 Hardened Cast Jaws;

One Dozen in a Bundle.

MT 332IV VISES WOODWORKERS' VISE VISES.

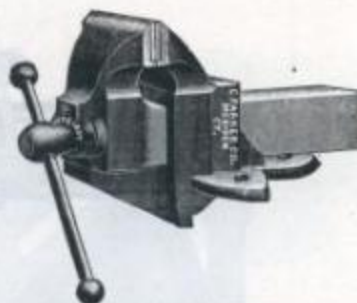


PARKERS' WOODWORKERS'.

Steel Faced Jaws; Cast Iron Body, Japanned; Swivel Bottom; Polished Slide and Jaws; Steel Sliding Lever Handle; Self-adjusting Back Jaws for Holding Irregular Shaped Articles.

Nos.	276	277
Width of Jaws, inches.....	4	4½
Jaws Open, inches.....	7½	9½
Weight each about, lbs.....	40	65
Each	\$9.50	13.00

Packed Loose.



PARKERS' COACHMAKERS.

Steel Faced Jaws; Cast Iron Body, Japanned, Stationary Base; Polished Slide and Jaws; Steel Sliding Lever Handle; Designed for the use of Carpenters, Cabinet Makers, Pattern Makers and Woodworkers generally.

No.	40½
Width of Jaws, inches.....	4½
Jaws Open, inches.....	9½
Weight each about, lbs.....	57
Each	\$10.25

EMMERT UNIVERSAL WOODWORKERS' AND PATTERN MAKERS' VISE.



Cast Iron, Japanned Body, Steel Faced Jaws, Polished Steel Sliding Bar.

This Vise, when in Natural Position on the side of the Bench, is Flush with the Top of the Bench. In this position it can be Unlocked and Changed into a Variety of Positions, always presenting the work in an attitude to the workman that he can Operate with Comfort.

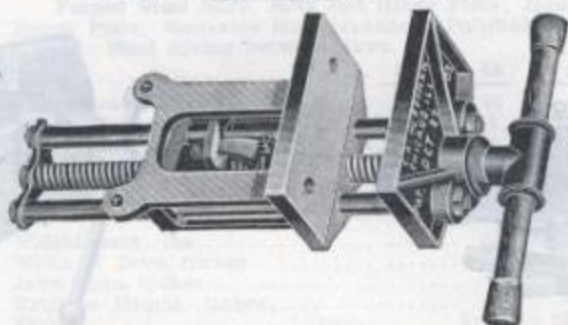
No. 1W Vise has 7 Different Pairs of Jaws, any pair of which may be Instantly Adjusted to the position required by the Operator. One Pair of these Jaws is 18 inches Wide, Three Pairs each 7 inches Wide, Two Pairs each 1 inch Wide, and the other 3 inches Wide, Steel Faced and Slightly Roughened for Holding Metal Work. This Equipment enables the Operator to adapt this Vise to grasp any kind of work without regard to Irregularity of form.

No. 2W Vise has One Pair Less of Holding Dogs so arranged that they may be Secreted when not in use.

No. 1W—Size of Body 7x18½ inches; Jaws Open 14 inches; Weight each about 100 lbs.....	Each \$15.00
No. 2W—Size of Body 5x14 inches; Jaws Open 12 inches; Weight each about 70 lbs.....	12.50
One in a Crate.	

-350A- **VICES.**

WOOD WORKERS'.
 HERRIMAN RAPID ACTING.



To Set Flush with Bench: Two Cold Rolled Steel Slide Guides, with Malleable Screw working between; Patent Self-adjusting Bronze Clutch Nut; Finest Gray Iron Parallel Jaws with Faces carefully Planed; Other Parts Malleable Iron; Polished Wood Sliding Handle with Malleable Cap at one end.

Each

No. H7—Jaws 7 inches Wide, 4 inches Deep and Open 9 inches; $1\frac{1}{4}$ inch Screw; Weight each about 27 lbs.. \$7.00

No. H10—Jaws 10 inches Wide, 4 inches Deep, and Open 12 inches; $1\frac{1}{4}$ inch Screw; Weight each about 47 lbs. 9.00

Packed Loose.

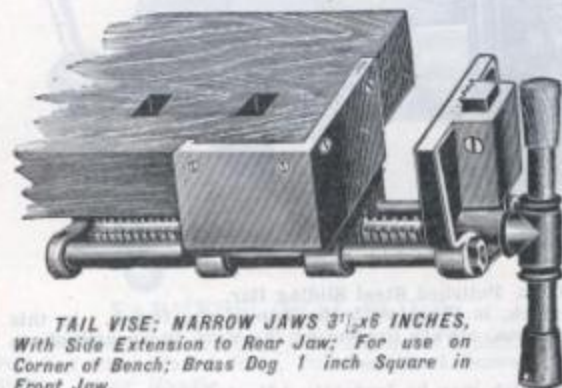
TOLES' RAPID ACTING.



To Set Flush with Bench: Two Polished Parallel Steel Slide Bars with Polished Steel Slotted Screw working between; Patent Self-adjusting Bronze Clutch Nut; Japanned Malleable Parallel Jaws, Rear Piece and Handle Socket; Polished Hickory Sliding Handle with Malleable Cap at one end; Jaws have Carefully Planed Faces.

REGULAR: WIDE JAWS 4x10 INCHES.

Nos.	±20/12	±20/14	±20/16	±20/18	±20/20	±20/22	±20/24
Jaws Open, inches.....	12	14	16	18	20	22	24
Weight each about, lbs.....	36	37	38	39	40	41	42
Each.....	\$6.50	7.00	7.50	8.00	8.50	9.00	9.50



TAIL VISE: NARROW JAWS 3"x6 INCHES.
 With Side Extension to Rear Jaw; For use on Corner of Bench; Brass Dog 1 inch Square in Front Jaw.

Nos.	±35/6	±35/8	±35/10	±35/12
Jaws Open, inches.....	6	8	10	12
Weight each about, lbs.....	30	31	32	33
Each.....	\$6.00	6.50	7.00	7.50



REGULAR: WIDE JAWS 4x10 INCHES. With Brass Bench Stop 1 inch Square in Back Jaw; and Brass Dog 1 inch Square in Front Jaw.

No.	±40/12	±40/14	±40/16	±40/18
Jaws, Open, inches.	12	14	16	18
Weight each about, lbs	39	40	41	42
Each	\$7.50	8.00	8.50	9.00
Nos	±40/20	±40/22	±40/24	
Jaws Open, inches.	20	22	24	
Weight each about, lbs	43	44	45	
Each	\$9.50	10.00	10.50	

About Six in a Barrel.

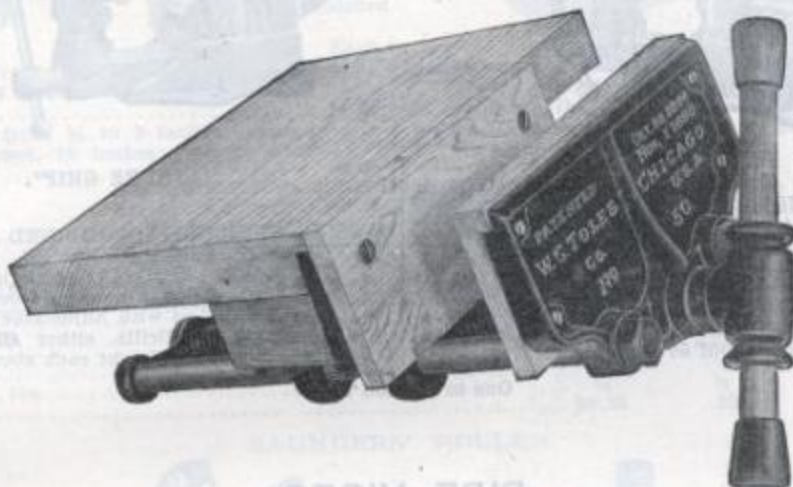
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COMBINED ANVILS AND VISES. VISES.

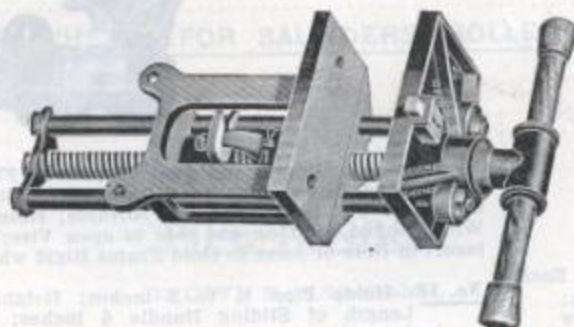
TOLES RAPID ACTING.

Steel Guides, Cast Iron Jaws and Frame; Bronze Nut; $1\frac{1}{4}$ inch Screw.



No. T50—Jaws 10 inches Wide and Open 12 inches; Depth of Jaws $4\frac{1}{2}$ inches; Weight each about 37 lbs.... Each \$7.00
Packed Loose.

WOOD WORKERS'. HERRIMAN RAPID ACTING.



No. H17—Jaws 10 inches Wide, 4 inches Deep, and Open 12 inches; $1\frac{1}{4}$ inch Screw; Front Jaw Fitted with a Dog; Weight each about 48 $\frac{1}{2}$ lbs..... Each \$10.00
No. H11—Jaws 7 inches Wide, 4 inches Deep and Open 9 inches; $1\frac{1}{4}$ inch Screw; Front Jaw Fitted with a Dog; Weight each about 28 $\frac{1}{2}$ lbs..... 8.00
Packed Loose.

TRADE MARK:
"SURE GRIP"
REGISTERED.

MT



COMBINED ANVILS AND VISES.



SURE GRIP*.

Each

- No. SG—SURE GRIP*;** COMBINED ANVIL AND VISE, with 4 inch Steel Faced Adjustable Jaws; Opens 12 inches; Double Pipe Holding Attachments, Holding Pipe from $\frac{1}{4}$ to 2 inches; Solid Screw Box; Face of Anvil $8\frac{1}{2} \times 3$ inches; Length over all, Closed $16\frac{1}{2}$ inches, Open 22 inches; Height 7 inches; Painted Red; Weight each about 50 lbs..... \$6.00



SURE GRIP*.

Each

- No. SGD—SURE GRIP*;** COMBINED ANVIL AND VISE; Same as No. SG, except with DRILL ATTACHMENT, which is Easily Removed when not in use. Independent Screw Feed; Drill Rest with Adjustable Step; Takes Square Shank Drills, either KEEN KUTTER or Morse No. 109. Weight each about 60 lbs.... \$8.50

One in a Wood Box.

PIPE VISES.



Each

- No. 5C—**With Steel Link Chain; Polished Steel Screw and Cast Iron Adjusting Handle at Bottom; Chain Fits in Groove on Side of Frame, Adjusting to the different size Pipe; Holds Pipe $\frac{1}{4}$ to $2\frac{1}{2}$ inches; Height over all 7 inches; Length of Adjusting Handle $6\frac{1}{2}$ inches; Size of Base $7\frac{1}{2} \times 5\frac{1}{2}$ inches; Weight each about 11 lbs..... \$10.00

Packed Loose.



Each

- No. 1E—**Holds Pipe $\frac{1}{4}$ to 2 inches; Height over all 9 $\frac{1}{2}$ inches; Length of Sliding Handle 6 inches; Size of Base $4\frac{1}{4} \times 5\frac{1}{2}$ inches; Weight each about 5 lbs..... \$8.00
- No. 3E—**Holds Pipe $\frac{1}{4}$ to $2\frac{1}{2}$ inches; Height over all 13 $\frac{3}{4}$ inches; Length of Sliding Handle 8 $\frac{1}{2}$ inches; Size of Base $5\frac{1}{2} \times 6\frac{1}{2}$ inches; Weight each about 11 $\frac{1}{2}$ lbs..... 10.00
- No. 4E—**Holds Pipe $\frac{1}{4}$ to $3\frac{1}{2}$ inches; Height over all 14 inches; Length of Sliding Handle 9 $\frac{3}{4}$ inches; Size of Base $5\frac{1}{2} \times 8$ inches; Weight each about 15 $\frac{1}{2}$ lbs..... 14.00
- No. 12—**Holds Pipe $\frac{1}{2}$ to $4\frac{1}{2}$ inches; Height over all 16 inches; Length of Sliding Handle 11 $\frac{1}{2}$ inches; Size of Base $6\frac{1}{2} \times 9$ inches; Weight each about 22 lbs..... 20.00

Packed Loose.

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PIPE CUTTERS.

BARNES' PATTERN, THREE WHEEL.



Polished Malleable Iron
Shank and Frame; Japan-
ned Cast Iron Handle;
Cutters Forged from Best
Jessop Tool Steel, Temper-
ed and Oil Finished.



	Each
No. B1—Cuts Pipe from $\frac{1}{8}$ to 1 inch; Length over all, closed, 13 inches; Weight each about 3 lbs.	\$4.50
No. B2—Cuts Pipe from $\frac{1}{2}$ to 2 inches; Length over all, closed, 16 inches; Weight each about 5 lbs.	6.00

	Each
No. B3—Cuts Pipe from $\frac{1}{2}$ to 3 inches; Length over all, closed, 21 inches; Weight each about $8\frac{1}{2}$ lbs.	\$10.00
No. B4—Cuts Pipe from $2\frac{1}{2}$ to 4 inches; Length over all, closed, 25 inches; Weight each about 14 lbs.	20.00
No. B5—Cuts Pipe from 4 to 6 inches; Length over all, closed, 30 inches; Weight, each, about 22 lbs.	30.00

EXTRA CUTTER WHEELS FOR BARNES' PATTERN PIPE CUTTERS.

Nos.	B1	B2	B3	B4
Diameter, inches	1	$1\frac{1}{16}$	$1\frac{1}{8}$	$1\frac{1}{2}$
Weight each about, lbs.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$
Each	\$0.25	.30	.40	.50

SAUNDERS' ROLLER.



Japanned Malleable Iron Shank and Frame; Japanned Cast Iron Handle; One Cutter and two Rollers Forged from Tool Steel, Tempered.

No.	S/1	S/2	S/3
Cuts Pipe, inches	$\frac{1}{8}$ to 1	1 to 2	2 to 3
Length over all, inches	16	20 $\frac{1}{2}$	26 $\frac{1}{2}$
Weight each about, lbs.	$3\frac{1}{2}$	6 $\frac{1}{4}$	12
Each	\$3.00	4.50	11.00

EXTRA CUTTER WHEELS FOR SAUNDERS' ROLLER PIPE CUTTERS.

No.	S/1	S/2	S/3
Diameter, inches	$1\frac{1}{16}$	$1\frac{5}{16}$	$1\frac{1}{2}$
Weight each, ounces	$\frac{3}{4}$	$1\frac{1}{4}$	4
Each	\$0.24	.32	.60

Packed Loose.

PIPE TONGS.

BROWN'S, Adjustable.

Forged Tool Steel, Natural Finish; Tempered Jaws; Adjusted by Heavy Wrought Steel Thumb Screws.



Nos.	1	$1\frac{1}{2}$	2	3	4
For Pipe, Size, inches ..	$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{1}{2}$ to 1	$\frac{1}{2}$ to $1\frac{1}{4}$	1 to 2	$1\frac{1}{2}$ to 3
Length over all, inches ..	$13\frac{1}{2}$	17	20	25	37
Weight each about, lbs. ..	$2\frac{1}{2}$	4	6	10	21
Each	\$1.30	1.65	2.00	3.00	6.00

Packed Loose.



CHAIN PIPE WRENCHES.



YANKEE.

Drop Forged from One Piece Steel, Natural Finish; Flat Link Steel Chain; Milled Teeth on Both Sides of Head.

Size.	Capacity, Size Pipe.	Length Over all.	Length, Flat Link Chain.	Average Break- ing Strain, Flat Link Chain.	Weight each about,	Each.
No. 1Y	1/4 to 1 1/2 in.	20 in.	15 in.	6700 lbs.	5 lbs.	\$ 3.50
No. 2Y	1/4 to 2 1/2 in.	27 in.	20 in.	9800 lbs.	8 lbs.	5.00
No. 3Y	3/4 to 4 in.	37 in.	28 in.	12500 lbs.	16 lbs.	7.00
No. 3 1/2 Y	1 to 6 in.	44 in.	37 in.	14300 lbs.	21 lbs.	9.00
No. 4Y	1 1/2 to 8 in.	50 in.	45 in.	15700 lbs.	28 lbs.	11.00
No. 5Y	2 to 14 in.	64 in.	54 1/2 in.	21800 lbs.	45 lbs.	18.00

†EXTRA FLAT LINK CHAIN FOR YANKEE PIPE WRENCHES.

†Nos	1YC	2YC	3YC	3 1/2 YC	4YC	5YC
Weight each about, lbs	1	1 1/2	3 1/2	4 1/2	8 1/2	14
Each	\$1.00	2.00	3.00	3.50	4.00	6.00

Packed Loose.

PIPE TONGS.



TRADE MARK:
"KEEN KUTTER BLACK JACK,"
AND
"NEVERSLIP,"
REGISTERED

WRENCHES.



Forged from Extra Quality Tool Steel; Hardened and Polished Jaws; SHANK EXTENDS THROUGH TO END OF HANDLE; Varnished Beechwood Grips riveted to Handle with Two Heavy Iron Rivets; Steel Adjusting Screw.

No. B—KEEN KUTTER BLACK JACK*, Solid Handle, Black.

Length, inches	6	8	10	12	15	18	21
Jaws, Open, inches	1	1½	1¾	2¼	2¾	3¼	3¾
Weight per dozen about, lbs.	9	16	27	39	57	75	102
Per dozen	\$9.00	10.00	12.00	14.00	24.00	30.00	36.00

6 to 12 inches, ½ Dozen; 15 and 18 inches, ¼ Dozen; 21 inches, 1/12 Dozen in a Wood Box.



Extra Finish; Wrought Iron Jaws and Adjusting Screw; Polished Malleable Iron Ferrule; SHANK EXTENDS THROUGH TO END OF HANDLE; Screwed to Cap at end; Plain Hardwood Grip.

No. NS—NEVER SLIP*, Black.

Length, inches	6	8	10	12	15
Jaws, Open, inches	1½	1¾	2	2¾	3½
Weight per dozen about, lbs.	9	16	27	39	57
Per dozen	\$10.00	12.00	14.00	17.00	24.00

One-half Dozen in a Package.



ACME.

No. A—Acme.

Cast Steel, Polished Head and Jaws; Wrought Iron Shank; Japanned Finish Twisted Handles; Shank and Handle One Piece extending through Head.

Length, inches	6	8	10	12	15
Jaws Open, inches	1½	1¾	1¾	2¾	4
Weight per dozen about, lbs.	9	14	22	32	52
Per dozen	\$10.00	12.00	14.00	17.00	24.00

6 to 12 inches, One-half Dozen in a Wood Box; 15 inches, One-half Dozen in a Package.



ADJUSTABLE "S".

NEVER SLIP*, Wescott Pattern, Polished and Hardened Cast Steel Jaws; Japanned Finish Handle; Knurled Adjusting Screw; Sliding Jaw works on Grooved Surface in Hollow Part of Head.

No. WP—NEVER SLIP*.

Length, inches	6	8	10	12	14
Extreme Width of Opening, inches	¾	1	1½	1¾	2
Weight per dozen about, lbs.	5½	13	23	37	61
Per dozen	\$7.20	9.00	12.00	15.00	21.00

One-half Dozen in a Wood Box.

TRADE MARKS:
E. C. SIMMONS' KEEN KUTTER;
SURE GRIP, and
"DUCK BILL,"
REGISTERED.

WRENCHES.



KEEN KUTTER* BOLT WRENCHES.

Forged from Tool Steel; Tempered and Hardened Jaws and Thread Cutters. Per Dozen
No. 23—KEEN KUTTER* COMBINATION BOLT WRENCH AND THREAD CUTTER; Length over all 5 5/8 inches;
Straw Finish; Will Hold Round Iron 1/4 to 3/8 inches; Size of Thread Cutters 1/2, 5/8 and 7/16 inches;
Weight per dozen about 5 lbs. \$5.00
One Dozen in a Cardboard Box.



KEEN KUTTER* SURE GRIP.

Forged from Special Crucible Steel; Oil Tempered; Milled Teeth.

Per Dozen
No. 15—LENGTH 4 INCHES; NATURAL FINISH;
Holds Pipe 1/2 inch and Smaller; Openings
in Handle suitable to hold Nuts, Sizes 1/4, 5/16
and 3/8 inch; Screw Driver End 5/16 inch Wide
at Point; Weight per dozen about 1 1/2 lbs. \$4.00

LENGTH 5 1/2 INCHES; Holds Pipe 3/8 inch and
Smaller; Openings in Handle suitable to hold Nuts,
Sizes 1/4, 3/8, 1/2, 5/8 and 3/4 inch. Per Dozen

No. 20—NATURAL FINISH..... \$4.00

No. 30—NICKEL PLATED..... 5.00

Weight per Dozen about 3 3/4 lbs.

One Dozen in a Cardboard Box.



KEEN KUTTER* SURE GRIP.

Forged from Special Crucible Steel, Tempered in Oil; Milled Teeth.

Natural Finish; Raised Surface; Polished.

Per Dozen
No. 40—LENGTH 5 1/2 INCHES; Holds Pipe 3/8
inch and Smaller; Openings in Handle suit-
able to hold Nuts, Sizes 1/4, 3/8, 1/2, 5/8 and 3/4
inch; Weight per dozen about 4 lbs. \$5.00
One Dozen in a Cardboard Box.

No. 50—LENGTH 7 INCHES; Holds Pipe 1/2 to 3/4
inch; Openings in Handle suitable to hold
Nuts, Sizes 3/8, 1/2, 5/8, 3/4 and 7/8 inch; Weight
per dozen about 9 lbs. 10.00
One-half Dozen in a Cardboard Box.



KEEN KUTTER* SURE GRIP.

Forged from Special Crucible Steel, Tempered in Oil;
Milled Teeth.

Per Dozen
No. 80—LENGTH 10 INCHES; NATURAL FIN-
ISH; Raised Surface Polished; Holds Pipe
3/4 inch and Smaller; Weight per dozen about
15 lbs. \$15.00
One-half Dozen in a Cardboard Box.

Natural Finish; Raised Surface; Polished.

Per Dozen
No. 60—LENGTH 9 INCHES; Holds Pipe 1/2 to 3/4
inch; Weight per dozen about 12 lbs. \$12.00

No. 70—LENGTH 16 INCHES; Holds Pipe 1/2 to
1 1/4 inches; Weight per dozen about 39 lbs. 24.00
One-half Dozen in a Cardboard Box.



DUCK BILL*.

Forged from Extra Quality Tool Steel, Oil Tempered;
Natural Finish Knurled Body; Raised Surface of Jaws
and Edges Nickel Plated; Milled Teeth on One Jaw of
each End.

Per Dozen
No. JR—LENGTH 5 INCHES; Holds Nuts or Pipe
1/4 to 3/8 inch; Weight per dozen about 6 lbs. \$5.00

No. SR—LENGTH 7 INCHES; Holds Nuts or Pipe
1/4 to 1 1/4 inches; Weight per dozen about
12 lbs. 6.75

One-half Dozen in a Cardboard Box.

WRENCHES.



**ESSEX*.
BICYCLE.**

No. E5 1/2—NICKEL PLATED; Extra Quality Cast Steel; Case Hardened Jaws; Length 5 1/2 inches; Jaws open 1 7/16 inch; Weight per dozen about 3 3/4 lbs. \$10.00
One Dozen in a Cardboard Box.



**ESSEX*.
BICYCLE.**

No. E9—PLAIN BLACK FINISH; Cast Steel; Case Hardened Jaws; Length 9 1/2 inches; Jaws Open 2 1/2 inches; Weight per dozen about 16 lbs. \$12.00
One-half Dozen in a Wood Box.



**QUEEN.
BICYCLE.**

No. 98—FROSTED FINISH; Cast Steel; Length 5 1/2 inches; Jaws Open 1 3/8 inches; Weight per dozen about 4 1/2 lbs. \$6.00
One Dozen in a Cardboard Box.



**LACLEDE*.
BICYCLE.**

No. L—NICKEL PLATED; Extra Quality Cast Steel; Case Hardened Jaws; Length 5 inches; Jaws Open 1 1/2 inches; Weight per dozen about 4 1/2 lbs. \$8.00
One Dozen in a Cardboard Box.



**BAXTER'S, Adjustable, Bright.
BICYCLE.**

No. BA.

	4	6	8
Length, Closed, inches.....	7 1/2	10	12 1/4
Jaws Open, inches.....	7 1/2	10	17
Weight per dozen about, lbs.....	\$6.00	9.00	12.00
Per dozen.....			

One-half Dozen in a Package.



Double End; Drop Forged from Tool Steel; Natural Finish; Milled Openings.

Nos. 341 to 367.
MACHINE.

Nos.	341	343	344	348
Extreme Length, inches.....	4	4	4	5 1/16
Thickness of Head, inches.....	1/4	1/4	1/4	1/4 and 5/16
Size of Openings, inches.....	3/4 and 5/8	5/16 and 7/16	3/8 and 7/16	1/2 and 5/16
Fits Set Screw, size, inches.....	3/4 and 5/8	5/16 and 7/16	3/8 and 7/16	1/2 and 5/16
Fits Square Head Cap Screws, size, inches.....			3/8 and 5/16	5/16 and 3/8
Fits Hexagon Head Cap Screws, size, inches.....			5/16 and 3/8	5/16 and 3/8
Weight per dozen about, lbs.....	1 1/4	1 1/4	1 1/4	1 1/4
Per dozen.....	\$1.08	1.08	1.08	1.44
Nos.	354	363	367	
Extreme Length, inches.....	6	7	9	
Thickness of Head, inches.....	3/8	3/8	3/8	
Size of Openings, inches.....	3/8 and 1/2	3/8 and 1/2	1 1/4 and 1 1/4	
Fits Set Screw, size, inches.....	3/8 and 1/2	3/8 and 1/2	1 1/4 and 1 1/4	
Fits Square Head Cap Screws, size, inches.....	3/8 and 1/2	3/8 and 1/2	1 1/4 and 1 1/4	
Fits Hexagon Head Cap Screws, size, inches.....	3/8 and 1/2	3/8 and 1/2	1 1/4 and 1 1/4	
Weight per dozen about, lbs.....	7	18	21	
Per dozen.....	\$1.92	2.52	4.08	

Packed Loose.

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WRENCHES.



Nos. 500/S to 504/S.

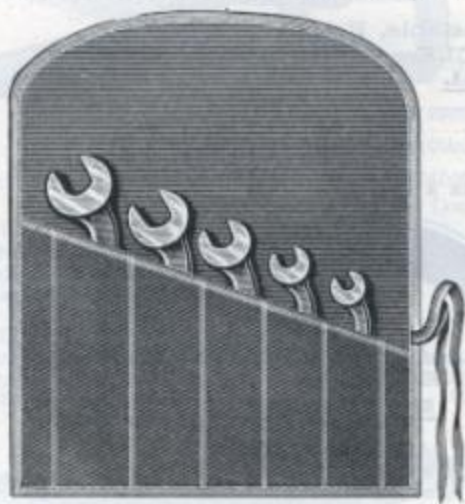
GENERAL PURPOSE.

Double End; Drop Forged from Tool Steel; Natural Finish Body, Case Hardened; Bright Heads with Milled Openings.

Nos.	500/S	501/S	502/S	503/S	504/S
Extreme Length, inches	6¼	7½	8¼	9¼	10½
Thickness of Head, inches	7/32	¼	5/16	¾	7/16
Size of Openings, inches	¾ and 1½	½ and ¾	¾ and 1	¾ and 1	¾ and 1
Fits Nuts of Standard Bolts, Size, inches	3/16 and ¼	¼ and 5/16	5/16 and ¾	¾ and 7/16	7/16 and 1½
Weight per dozen about, lbs.	1¾	3½	5½	8½	12
Per dozen	\$2.40	3.00	3.96	5.04	6.12

Double End; Drop Forged from Tool Steel; Natural Finish Body and Heads; Milled Openings.

Nos.	500U	501U	502U	503U	504U
Extreme Length, inches	6¼	7½	8¼	9¼	10½
Thickness of Head, inches	7/32	¼	5/16	¾	7/16
Size of Openings, inches	¾ and 1½	½ and ¾	¾ and 1	¾ and 1	¾ and 1
Fits Nuts of Standard Bolts, Size, inches	3/16 and ¼	¼ and 5/16	5/16 and ¾	¾ and 7/16	7/16 and 1½
Weight per dozen about, lbs.	1¾	3½	5½	8½	12
Per dozen	\$1.56	2.04	2.64	3.36	4.08



Showing Roll Open.



Showing Roll Closed.

GENERAL PURPOSE, IN ROLLS.

Dimensions of Rolls, 11 inches Long, 2¾ inches Diameter.

	Per Roll
No. 500/S/4—Black Duck Roll, with Red Binding; Complete with 5 Wrenches, One Each Nos. 500/S, 501/S, 502/S, 503/S and 504/S	\$2.50
No. 500U/4—Black Drill Roll; Complete with 5 Wrenches, One Each Nos. 500U, 501U, 502U, 503U and 504U.	1.50

Weight of Roll with Tools about 2¾ lbs.

Packed Loose.

WRENCHES.



ELGIN (1905 PATTERN). Per Dozen

No. AE—ADJUSTABLE; LENGTH 7 INCHES;
Cast Steel, Full Nickel Plated; Hardened Jaws, with Milled Teeth; Jaws can be Closed by Adjusting Screw or by pressing on Upper Jaw; Lower Jaw and Handle One Piece, Reinforced at Jaws by Heavy Steel Plate, Screwed to Body; Hole in Handle for Threading Attachment; Holds Pipe, all sizes, up to $\frac{3}{4}$ inch, and Nuts up to $1\frac{1}{4}$ inch; Particularly adapted for use in corners and cramped places; Weight per dozen about $7\frac{1}{2}$ lbs. \$12.00
One Dozen in a Cardboard Box.



LIGHTING NUT.

Cast Steel.

For Bit Brace Use, for Square and Hexagon Nuts.

No. 602—Set of Five Wrenches; For Nuts $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$ and $\frac{1}{2}$ inch; Weight per set about 2 lbs. \$1.50
One Set in a Cardboard Box.

Straight Sizes.

Nos.	602 $\frac{1}{4}$	602 $\frac{5}{16}$	602 $\frac{3}{8}$	602 $\frac{7}{16}$	602 $\frac{1}{2}$
Length, inches	4 $\frac{1}{2}$	4 $\frac{3}{4}$	4 $\frac{3}{4}$	5 $\frac{1}{2}$	5 $\frac{1}{4}$
For Nuts, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
Wgt. doz. abt., lbs.	3	3	4 $\frac{1}{2}$	6	7 $\frac{1}{2}$
Per dozen	\$3.00	3.00	3.00	3.00	3.00

Nos. 602 $\frac{1}{4}$, 602 $\frac{5}{16}$ and 602 $\frac{3}{8}$, One-half Dozen, Nos. 602 $\frac{7}{16}$ and 602 $\frac{1}{2}$ One-third Dozen in a Cardboard Box.



BRACE.

Polished Steel for Square and Hexagon Nuts.

No. 100.

Size of Opening, inches	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
Length over all, inches	3 $\frac{1}{2}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	3 $\frac{3}{4}$	3 $\frac{3}{4}$	3 $\frac{3}{4}$	4	4 $\frac{1}{2}$	4 $\frac{1}{4}$	4 $\frac{1}{2}$
Weight per dozen about, lbs.	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3	3 $\frac{3}{4}$	4	6 $\frac{1}{4}$	5 $\frac{1}{4}$	6 $\frac{1}{4}$	8	8 $\frac{1}{4}$	11
Per dozen	\$1.75	2.00	2.00	2.50	2.50	3.00	3.00	3.50	4.00	5.00	6.00

One-fourth Dozen in a Cardboard Box.



KEEN KUTTER* PIPE.

(Stillson Pattern.)

Jaws and Handle Drop Forged Tool Steel; Jaws Double Reinforced, with Polished Edges, Tempered and Drawn and can be Re-sharpened with a File, always insuring a Bite; Polished Head; Nickel Plated Frame fastened to Handle with a Steel Pin; Steel Knurled Adjusting Nut; Nos. K6 and K8 have Single Springs; Nos. K10 to K24 have Double Spring. All have Steel Handles with Oval Grip which fits the hand.

Nos.	K 6	K 8	K 10	K 14	K 18	K 24
Length, inches	6	8	10	14	18	24
Adjustable for Pipe, inches	$\frac{1}{4}$ to $\frac{1}{2}$	$\frac{1}{2}$ to $\frac{3}{4}$	$\frac{3}{4}$ to 1	$\frac{1}{4}$ to $1\frac{1}{2}$	$\frac{1}{4}$ to 2	$\frac{1}{4}$ to $2\frac{1}{2}$
Weight per dozen about, lbs.	4 $\frac{1}{2}$	7 $\frac{1}{2}$	16 $\frac{1}{2}$	36	57	90
Per dozen	\$24.00	24.00	27.00	36.00	48.00	72.00

Nos. K6, K8, K10 and K14, One-half Dozen in a Cardboard Box; Nos. K18 and K24, one-half Dozen in a Wood Box.

WRENCHES.



Showing Wood Handle.



Showing Iron Handle.

Drop Forged Tool Steel; Polished Shank, Frame and Hardened Jaws; Frame fastened to Jaw by Movable Steel Pin; Jaw adjusted by Steel Nut; Shank extends through Ferrule and Handle, and screws in Cap at end; 6 to 14 inch have Ebony Finish Hardwood Handle; 18 to 48 inch have Steel Handle; 6 to 14 inch have Single Spring; 18 to 48 inch have Double Spring; Polished Steel Ferrule and Cap.

Length, open, inches.....	6	8	10	14	18	24	36	48
Adjustable for Pipe, inches.....	$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{1}{4}$ to $\frac{3}{4}$	$\frac{1}{2}$ to 1	$\frac{3}{4}$ to $1\frac{1}{2}$	$\frac{1}{2}$ to 2	$\frac{3}{4}$ to $2\frac{1}{2}$	$\frac{1}{2}$ to $3\frac{1}{2}$	1 to 5
Weight each about, lbs.....	$\frac{1}{4}$	$\frac{1}{2}$	$1\frac{1}{2}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$7\frac{1}{2}$	15	24
Each	\$2.00	2.00	2.25	3.00	4.00	6.00	12.00	18.00

6 to 24 inch, Six in a Wood Case; 36 and 48 inch, Packed Loose.

EXTRA JAWS, for STILLSON'S PIPE WRENCHES.



Inches	6	8	10	14	18	24	36	48
Weight each about, lbs...	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$	$4\frac{1}{2}$	$6\frac{3}{4}$
Each	\$0.75	.75	.80	1.00	1.33	2.10	4.75	7.25

EXTRA NUTS, for STILLSON'S PIPE WRENCHES.



Inches	6	8	10	14	18	24	36	48
Weight each about, lbs...	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1
Each	\$0.11	.11	.14	.17	.22	.35	.55	.95

EXTRA FRAMES, for STILLSON'S PIPE WRENCHES.



Length, open, inches.....	6	8	10	14	18	24	36	48
Weight each about, lbs.....	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	2
Each	\$0.35	.35	.40	.50	.55	.80	1.30	1.50

Packed Loose.



No. 45.



No. 43.

BEMIS & CALL'S COMBINATION.

Forged from Tool Steel; Polished Shank, Nut and Hardened Jaws; Extra Steel Grip, with Teeth on one end of Jaw for Pipe; Shank extends through Ferrule and Handle and screwed to Cap at end; Polished Ferrule and Cap; Polished Hardwood Handle.

No. 45—Bright, with Long Nut.

Inches	10	12	15	18
Adjustable to Pipe, in. $\frac{1}{2}$ to 1	$\frac{1}{2}$ to $1\frac{1}{4}$	$\frac{1}{2}$ to 2	$\frac{1}{2}$ to 3	$\frac{1}{2}$ to 3
Wgt. doz. about, lbs...	26	38	54	84
Per dozen.....	\$25.25	28.50	40.50	72.00

10 to 15 inch, One-half Dozen in a Wood Box; 18 inch, One-sixth Dozen in a Package.

No. 43—Bright, with Short Nut.

Inches	10	12	15	18
Adjustable to Pipe, in. $\frac{1}{2}$ to 1	$\frac{1}{2}$ to $1\frac{1}{4}$	$\frac{1}{2}$ to 2	$\frac{1}{2}$ to 3	$\frac{1}{2}$ to 3
Wgt. doz. about, lbs...	24	36	50	81
Per dozen.....	\$23.00	26.00	37.00	66.00

EXTRA DOGS OR GRIPS, NEW STYLE, WITH PIN, for B. & C. COMBINATION WRENCHES.

Inches	10	12	15
Weight each about, lbs.....	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
Each	\$0.25	.30	.35

Packed Loose.

EXTRA DOGS OR GRIPS, OLD STYLE, WITH SCREW, for B. & C. COMBINATION WRENCHES.

Inches	10	12	15
Weight each about, lbs.....	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
Each	\$0.25	.30	.35

When ordering Extra Dogs for B. & C. Combination Wrenches invariably specify what kind are wanted, viz.: "Old Style" with Screws; or "New Style" with Pins.

SOCKET WRENCHES.

SINGLE HEAD, Tool Steel.



With or Without Handle.

For Square Nuts, Cap-Screws and Set-Screws.

UNFINISHED: Natural Finish.

SEMI-FINISHED: Edges Ground and Case-hardened all over.

FINISHED: Polished all over, Case-hardened and Lacquered.

Hexagon End of Shank is designed for use in Combination with another Wrench or with Pin Handle.
Unless otherwise Specified, Wrenches with Pin Handles will be sent.

Number	SQUARE OPENINGS				Extreme Length, Inches	Diam. of Head Inches	Diam. of Shank, Inches	Hex. End Same Size as U. S. Nut; Size Bolt, Inches	Size of Pin-Handle		Weight, each	Unfinished, each		Semi-finished, Each		Finished, Each	
	For U. S. Standard Nut; Size Bolt, Inches	For Cap Screw; Diam.-Screw, Inches	For Set Screw; Size, Inches	Short Diam. Recessed Opening, Inches					Diameter, Inches	Length, Inches		Without Pin-Handle or Hole	With Pin- Handle and Hole	Without Pin-Handle or Hole	With Pin- Handle and Hole	Without Pin-Handle or Hole	With Pin- Handle and Hole
320A			1/8	1/8	3 5/8	1 1/32	7/32	1/8	1/8	3	1 oz.	\$.18	\$.26	\$.27	\$.35	\$.36	\$.44
321C			3/16	13/64	4	1 1/2	1/4	3/16	3/16	4	1 1/2 "	.20	.30	.30	.40	.40	.50
321B			1/4	17/64	4	1 1/2	1/4	3/16	3/16	4	1 1/2 "	.20	.30	.30	.40	.40	.50
322D			5/16	21/64	4 1/2	5 5/8	3/4	1/4	7/32	4 1/2	3 "	.22	.33	.33	.44	.44	.55
323B		1/4	3/8	25/64	4 7/8	11 1/16	3/8	5/16	9/32	4 7/8	3 "	.24	.37	.36	.49	.48	.61
324C		5/16	7/16	29/64	5 3/4	7 5/8	7/16	3/8	5/16	5 3/4	5 1/2 "	.29	.43	.44	.58	.58	.72
325D	1/4	3/8	1/2	33/64	6 3/8	1	1/2	7/16	11/32	6 3/8	7 "	.32	.47	.48	.63	.64	.79
325E		7/16	9/16	37/64	6 1/2	1 1/8	9/16	1/2	13/32	6 1/2	10 "	.36	.53	.54	.71	.72	.89
326D	5/16			39/64	6 3/4	1 1/8	9/16	1/2	13/32	6 3/4	10 "	.36	.53	.54	.71	.72	.89
326E		1/2	5/8	41/64	7	1 1/4	5/8	1/2	13/32	7	13 "	.40	.57	.60	.77	.80	.97
326F	3/8	9/16		45/64	7	1 1/4	5/8	1/2	13/32	7	14 "	.40	.57	.60	.77	.80	.97
327C		5/8	3/4	49/64	7 3/8	1 3/8	5/8	9/16	7/16	7 3/8	15 "	.46	.64	.69	.87	.92	1.10
327D	7/16			51/64	7 7/8	1 1/2	11/16	5/8	1/2	7 7/8	1 1/4 lbs	.52	.72	.78	.98	1.04	1.24
328C	1/2	3/4	7/8	57/64	8 3/4	1 5/8	3/4	5/8	1/2	8 3/4	1 1/2 "	.60	.80	.90	1.10	1.20	1.40
329B	9/16			63/64	8 5/8	1 3/4	13/16	3/4	9/16	8 5/8	2 "	.70	.95	1.05	1.30	1.40	1.65
329C			1	1 1/64	9 1/8	1 7/8	7/8	3/4	5/8	9 1/8	2 1/4 "	.80	1.10	1.20	1.50	1.60	1.90
329D	5/8			1 1/64	9 1/2	2	15/16	7/8	11/16	9 1/2	2 1/4 "	.90	1.25	1.35	1.70	1.80	2.15
330D		7/8	1 1/8	1 1/32	9 1/2	2	15/16	7/8	11/16	9 1/2	3 "	.90	1.25	1.35	1.70	1.80	2.15
330E	3/4	1	1 1/4	1 1/32	10 3/8	2 1/4	1 1/16	1	3/4	10 3/8	4 "	1.15	1.55	1.72	2.12	2.30	2.70
331C		1 1/8		1 13/32	10 7/8	2 1/2	1 1/8	1 1/8	13/16	10 7/8	5 "	1.30	1.75	1.95	2.40	2.60	3.05
331D	7/8			1 15/32	10 3/4	2 1/2	1 1/8	1 1/8	13/16	10 3/4	5 "	1.30	1.75	1.95	2.40	2.60	3.05
332B		1 1/4		1 17/32	10 7/8	2 1/2	1 1/8	1 1/8	13/16	10 7/8	5 "	1.30	1.75	1.95	2.40	2.60	3.05
332C	1	1 3/8		1 19/32	11 3/8	2 3/4	1 3/16	1 1/8	13/16	11 3/8	6 "	1.60	2.05	2.40	2.85	3.20	3.65
333C	1 1/8			1 17/32	11 7/8	3	1 1/4	1 1/4	7/8	11 7/8	7 1/4 "	2.10	2.60	3.15	3.65	4.20	4.70
333D	1 1/4			2 1/32	12 1/2	3 5/16	1 3/8	1 3/8	1	12 1/2	9 "	2.80	3.45	4.20	4.85	5.60	6.25

Packed Loose.



SOCKET WRENCHES.

SINGLE HEAD, Tool Steel.



With or Without Handle.

For Hexagon Nuts and Cap-Screws.

UNFINISHED: Natural Finish.

SEMI-FINISHED: Edges Ground and Case-hardened all over.

FINISHED: Polished all over, Case-hardened and Lacquered.

Hexagon End of Shank is designed for use in Combination with another Wrench or with Pin Handle.

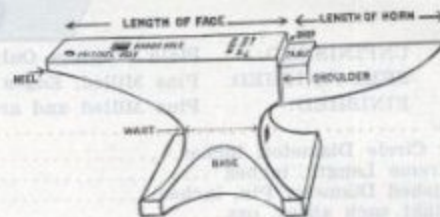
Unless otherwise Specified, Wrenches with Pin Handles will be sent.

Number	HEXAGON OPENINGS				Extreme Length, inches	Diam. of Head, inches	Diam. of Shank, inches	Hex. End same size as U.S. Nut, for size Bolt, inches	Size of Pin-Handle		Weight, each	Unfinished, Each		Semi-finished, Each		Finished, Each	
	For U. S. Standard Nut; Size Bolt, inches	For Cap Screw; Diam. Screw, inches	Short Diam. Bore, inches	Short Diam. Bore, inches					Diameter, inches	Length, inches		Without Pin-Handle or Hole	With Pin-Handle and Hole	Without Pin-Handle or Hole	With Pin-Handle and Hole	Without Pin-Handle or Hole	With Pin-Handle and Hole
321A	1/8		3/16	3/16	4	1 1/2	1/4	3/16	3/16	4	1 1/2 oz.	\$.20	\$.30	\$.30	\$.40	\$.40	\$.50
322A		3/16		3/16	4 1/2	2 1/2	3/8	1/4	7/16	4 1/2	3 "	.22	.33	.33	.44	.44	.55
322B	3/16			3/16	4 7/8	2 1/2	3/8	1/4	7/16	4 7/8	3 "	.24	.37	.36	.49	.48	.61
322C		1/4		3/16	4 7/8	2 1/2	3/8	1/4	7/16	4 7/8	3 "	.24	.37	.36	.49	.48	.61
323A	1/4		5/16	3/16	5 1/4	3 1/4	3/8	1/4	7/16	5 1/4	3 1/2 "	.26	.39	.39	.52	.52	.65
324A		3/8		3/16	5 3/4	3 1/2	7/16	3/8	7/16	5 3/4	5 1/2 "	.29	.43	.44	.58	.58	.72
324B	5/16			3/16	5 3/4	3 1/2	7/16	3/8	7/16	5 3/4	5 1/2 "	.29	.43	.44	.58	.58	.72
325A		7/16		3/16	6 1/8	1	1 1/2	7/16	1 1/2	6 1/8	7 "	.32	.47	.48	.63	.64	.79
325B	3/8			3/16	6 1/2	1 1/2	3/8	1 1/2	1 1/2	6 1/2	10 "	.36	.53	.54	.71	.72	.89
325C		1 1/2		3/16	6 1/2	1 1/2	3/8	1 1/2	1 1/2	6 1/2	10 "	.36	.53	.54	.71	.72	.89
326A	7/16			3/16	7	1 1/4	3/8	1 1/2	1 1/2	7	13 "	.40	.57	.60	.77	.80	.97
326B		9/16		3/16	7	1 1/4	3/8	1 1/2	1 1/2	7	14 "	.40	.57	.60	.77	.80	.97
326C	1 1/2		5/8	3/16	7 3/8	1 3/8	3/8	1 1/2	1 1/2	7 3/8	15 "	.46	.64	.69	.87	.92	1.10
327A	9/16			3/16	7 7/8	1 3/2	3/8	1 1/2	1 1/2	7 7/8	1 1/4 lbs.	.52	.72	.78	.98	1.04	1.24
327B		3/4		3/16	7 7/8	1 3/2	3/8	1 1/2	1 1/2	7 7/8	1 1/4 "	.52	.72	.78	.98	1.04	1.24
328A	5/8			3/16	8 1/4	1 5/8	3/4	1 1/2	1 1/2	8 1/4	1 1/2 "	.60	.80	.90	1.10	1.20	1.40
328B		7/8		3/16	8 3/8	1 5/8	3/4	1 1/2	1 1/2	8 3/8	2 "	.70	.95	1.05	1.30	1.40	1.65
329A	3/4	1		3/16	9 1/8	1 7/8	7/8	1 1/2	1 1/2	9 1/8	2 1/4 "	.80	1.10	1.20	1.50	1.60	1.90
330A		1 1/8		3/16	9 1/2	2	1 5/16	7/8	1 1/2	9 1/2	3 "	.90	1.25	1.35	1.70	1.80	2.15
330B	7/8			3/16	10	2 1/8	1	7/8	1 1/2	10	3 "	1.00	1.35	1.50	1.85	2.00	2.35
330C		1 1/4		3/16	10	2 1/8	1	7/8	1 1/2	10	3 "	1.00	1.35	1.50	1.85	2.00	2.35
331A	1			3/16	10 5/8	2 1/4	1 1/8	1	2 1/4	10 5/8	4 "	1.15	1.55	1.72	2.12	2.30	2.70
331B	1 1/8			3/16	10 5/8	2 1/4	1 1/8	1 1/8	2 1/4	10 5/8	5 "	1.30	1.75	1.95	2.40	2.60	3.05
332A	1 1/4			3/16	11 3/8	2 3/4	1 1/8	1 1/8	2 3/4	11 3/8	6 "	1.60	2.05	2.40	2.85	3.20	3.65
333A	1 3/8			3/16	11 7/8	3	1 1/4	1 1/4	7/8	11 7/8	7 1/4 "	2.10	2.60	3.15	3.65	4.20	4.70
333B	1 1/2			3/16	12 1/2	3 3/16	1 1/8	1 1/8	1	12 1/2	9 "	2.80	3.45	4.20	4.85	5.60	6.25

Packed Loose.

TRADE MARK:
"BLACK JACK,"
REGISTERED.

BLACKSMITH'S ANVILS.



BLACK JACK*.

SOLID WROUGHT IRON BODY AND HORN, Jappaned Finish, with Hardened and Tempered Crucible Tool Steel Face Welded on; Flat Ground and Polished; Square Hardy Hole near the Heel.

Nos.	10	20	30	40	50
Dimensions of Face, inches.....	2x6	2½x7	2½x8	2½x9	3x9½
Height over all, inches.....	4¼	5½	6	6½	7½
Length over all, inches.....	9½	11	13	15	16
Size of Hardy Hole, inches.....	¾	¾	¾	¾	¾
Weight each, lbs.	9 to 12	18 to 22	28 to 32	38 to 42	48 to 52
Per lb.	\$0.45	.32	.28	.22	.19
Nos.	60	70	75	80	85
Dimensions of Face, inches.....	3¼x10	3¼x11	3¼x11	3¼x12	3¼x13½
Height over all, inches.....	8	8¼	9	9	9
Length over all, inches.....	17	18½	18½	20½	22¼
Size of Hardy Hole, inches.....	¾	¾	7/16	¾	¾
Weight each, lbs.	58 to 62	68 to 72	75 to 79	80 to 83	84 to 87
Per lb.	\$0.17	.16	.16	.15	.15
Nos.	90	100	110	120	125
Dimensions of Face, inches.....	3¼x13½	3¼x13½	3¼x15	3¼x15	3¼x15
Height over all, inches.....	10	10	10	10¾	10¾
Length over all, inches.....	22¼	22¼	25	25	25
Size of Hardy Hole, inches.....	¾	¾	¾	¾	¾
Weight each, lbs.	88 to 95	96 to 106	107 to 116	117 to 123	124 to 128
Per lb.	\$0.15	.15	.15	.15	.15
Nos.	130	140	150	160	175
Dimensions of Face, inches.....	4x16½	4x16½	4x16½	4¼x17	4¼x17
Height over all, inches.....	10¾	11	11¼	11¼	11¼
Length over all, inches.....	27	27	27	28	28
Size of Hardy Hole, inches.....	¾	¾	¾	1	1
Weight each, lbs.	129 to 136	137 to 145	146 to 156	157 to 166	167 to 180
Per lb.	\$0.15	.15	.15	.15	.15
Nos.	200	225	250	300	400
Dimensions of Face, inches.....	4½x18	4½x20	4½x20	5x21	6x23
Height over all, inches.....	11¼	12	12½	13	14¼
Length over all, inches.....	29¼	32¼	32½	34	37½
Size of Hardy Hole, inches.....	1½	1½	1½	1½	1½
Weight each, lbs.	190 to 210	211 to 225	226 to 250	251 to 300	301 to 400
Per lb.	\$0.15	.15	.15	.15	.15

Packed Loose; Face and Horn Burlapped.

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BLACKSMITHS' TOOLS.



HOT CHISELS.



No. A—Polished Rounding Bit; Round Shoulder.

Width of Bit, inches...	± 1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$\pm 1\frac{3}{4}$	± 2
Weight each, lbs.	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{3}{4}$	5
Length over all, inches.	$6\frac{1}{4}$	$6\frac{3}{4}$	7	7	$8\frac{1}{2}$	9	9
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40

Solid Forged Steel, Oil Finished, with Hardened Bit and Face. Oval Eye.



COLD CHISELS.

No. B—Polished Rounding Bit.

Width of Bit, inches...	± 1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{1}{2}$	$\pm 1\frac{3}{4}$	± 2
Weight each, lbs.	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$4\frac{1}{4}$	$5\frac{1}{2}$
Length over all, inches.	$5\frac{1}{2}$	$5\frac{3}{4}$	$6\frac{1}{4}$	$6\frac{3}{4}$	$7\frac{1}{4}$	$8\frac{1}{2}$	$8\frac{1}{2}$
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40

PUNCHES.

Solid Forged Steel, Oil Finished, with Hardened Point; Oval Eye.



No. RP.

No. RP—Round; Polished Point.

Diameter of Point, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\pm \frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\pm \frac{3}{4}$	$\pm \frac{7}{8}$	± 1
Length over all about, inches	8	8	8	8	8	8	8	8	8
Weight each about, lbs.	1	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	$3\frac{1}{4}$	$3\frac{1}{2}$
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40



No. SP.

No. SP—Square; Polished Point.

Size of Point, inches (Square)	$\pm \frac{1}{4}$	$\pm \frac{5}{16}$	$\pm \frac{3}{8}$	$\pm \frac{7}{16}$	$\pm \frac{1}{2}$	$\pm \frac{5}{8}$	$\pm \frac{3}{4}$	$\pm \frac{7}{8}$	± 1
Length over all, about, inches	8	8	8	8	8	8	8	8	8
Weight each about, lbs.	1	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	$3\frac{1}{4}$	$3\frac{1}{2}$
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40

TOP SWAGES.

Solid Forged Steel, Oil Finished, with Hardened Face; Round Shoulder, Oval Eye.

No. TS—Top Pattern; Average Length, $5\frac{1}{2}$ to 6 inches.

Size, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\pm \frac{7}{16}$	$\frac{1}{2}$	$\pm \frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
Weight each about, lbs.	2	2	2	2	2	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	3	3	$3\frac{1}{2}$
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
Size, inches	$\pm \frac{1}{2}$	$1\frac{1}{8}$	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	2	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	3	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$
Weight each about, lbs.	$3\frac{3}{4}$	$3\frac{3}{4}$	4	$4\frac{1}{4}$	$4\frac{1}{4}$	5	8	$6\frac{1}{2}$	7	$7\frac{1}{2}$	$7\frac{1}{2}$	$7\frac{1}{2}$
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40



No. TS.

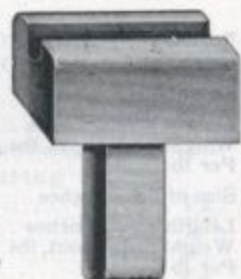
BOTTOM SWAGES.

Solid Forged Steel, Oil Finished, with Hardened Face, Square Shoulder, Square Shank for 1 inch Hole in Anvil.

No. BS—Bottom Pattern; Average Length, $\frac{1}{2}$ to $4\frac{1}{2}$ inches.

Size, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\pm \frac{7}{16}$	$\frac{1}{2}$	$\pm \frac{5}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
Weight each about, lbs.	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	2	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	3	3	$3\frac{1}{2}$
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
Size, inches	$\pm \frac{1}{2}$	$1\frac{1}{8}$	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	2	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$	3	$\pm \frac{1}{2}$	$\pm \frac{1}{2}$
Weight each about, lbs.	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{3}{4}$	4	4	$4\frac{1}{4}$	$5\frac{1}{2}$	$6\frac{1}{4}$	$6\frac{1}{2}$	7	$7\frac{1}{2}$	$7\frac{1}{2}$
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40

Packed Loose.



No. BS.

MT



PIN SPANNERS.

Tool Steel.



UNFINISHED: Plain Forgings Only.

SEMI-FINISHED: Pins Milled, Edges Ground and are Case-hardened all over.

FINISHED: Pins Milled and are Polished and Case-hardened all over.

Nos.	204	205	206	207	208	209	210
For Circle Diameter, inches	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
Extreme Length, inches	4	4 1/2	5	5 1/2	6	6 1/2	7
Finished Diameter Pin, inches	3/16	13/64	7/32	15/64	3/4	17/64	9/32
Weight each about, ozs.	1	1 1/2	2	2 1/2	3	4	4 1/2
Unfinished, each	\$0.18	.19	.20	.21	.22	.23	.24
Semi-finished, each	.27	.29	.30	.31	.33	.35	.36
Finished, each	.35	.38	.40	.42	.44	.46	.48

Nos.	211	212	213	214	215	216	218	220
For Circle Diameter, inches	2 3/4	3	3 1/4	3 1/2	3 3/4	4	5	6
Extreme Length, inches	7 1/2	8	8 1/2	9	9 1/2	10	12	14
Finished Diameter Pin, inches	19/64	5/16	21/64	11/32	23/64	3/4	7/16	1/2
Weight each about, ozs.	6	7 1/2	8	9	10 1/2	12	22	28
Unfinished, each	\$0.26	.28	.30	.32	.34	.36	.48	.65
Semi-finished, each	.39	.42	.45	.48	.51	.54	.72	.98
Finished, each	.52	.56	.60	.64	.68	.72	.96	1.30

FACE SPANNERS.

Tool Steel.



UNFINISHED: Pins Milled Only.

SEMI-FINISHED: Pins Milled, Edges Ground and Case-hardened all over.

FINISHED: Pins Milled, and are Polished all over, Case-hardened and Lacquered.

Nos.	418	420	422	424	426	428	430
Distance, Center to Center of Pins, inches	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
Diameter of Pins, Milled, inches	3/16	7/32	7/32	7/32	3/4	1/4	9/32
Length of Pins, inches	3/16	7/32	7/32	7/32	3/4	1/4	9/32
Span of Jaws in Clear, inches	11/16	29/32	1 1/4	1 1/4	1 1/4	1 1/4	2 3/32
Length over all, from Center of Pins, inches	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2
Thickness, inches	3/16	3/16	3/16	7/32	7/32	7/32	3/4
Weight each about, ozs.	2	3	4	5	6	7	9
Unfinished, each	\$0.15	.17	.19	.22	.25	.29	.33
Semi-finished, each	.22	.26	.28	.33	.38	.43	.50
Finished, each	.30	.34	.38	.44	.50	.58	.66

Nos.	432	434	436	438	440	442
Distance, Center to Center of Pins, inches	2 3/4	3	3 1/4	3 1/2	3 3/4	4
Diameter of Pins, Milled, inches	9/32	5/16	5/16	5/16	3/4	3/4
Length of Pins, inches	9/32	5/16	5/16	5/16	3/4	3/4
Span of Jaws in Clear, inches	2 11/32	2 19/32	2 15/16	3 1/32	3 1/4	3 7/16
Length over all, from Center of Pins, inches	8	8 1/2	9 1/4	9 3/4	10 3/4	11
Thickness, inches	3/4	3/4	3/4	3/4	1 1/4	1 1/4
Weight each about, ozs.	10	11	12	13	16	19
Unfinished, each	\$0.38	.43	.49	.55	.62	.70
Semi-finished, each	.57	.64	.74	.82	.93	1.05
Finished, each	.76	.86	.98	1.10	1.24	1.40

Packed Loose.



BLACKSMITHS' TOOLS.

±CENTER PUNCHES.



±COUNTER SINKS.



Solid Forged Steel, Oil Finished, with Hardened Points; Oval Eye.

POLISHED SHARP TAPERING POINT.

No.	±CP
Weight each about, lbs.	2
Length over all, inches	6 1/2
Per lb.	\$0.40

POLISHED ROUNDING TAPER POINT.

No.	±CS
Weight each about, lbs.	2
Length over all, inches	5 3/4
Per lb.	\$0.40

±HEADING TOOLS.



Solid Forged Steel, Oil Finished, with Hardened Head.

±No. HT—ROUND HANDLE; POLISHED CYLINDRICAL HEAD, WITH HOLE.

Diameter of Hole, inches	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
Length over all about, inches	12 1/2	12 1/2	12 1/2	12 1/2	12 1/2	13 1/2	13 1/2	13 1/2	14 1/2	14 1/2
Weight each about, lbs.	2 1/4	2 1/8	3	3 1/4	3 1/2	4	4 1/4	4 1/2	4 3/4	5
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40

FLATTERS.



±SET HAMMERS.



Solid Forged Steel, Oil Finished, with Hardened Face; Oval Eye.

No. SF—SQUARE POLISHED EXTENSION FACE, ROUNDDING SHOULDER.

Size of Face, inches	2	$\pm 2\frac{1}{4}$	$2\frac{1}{2}$	$\pm 2\frac{3}{4}$	3
Length about, inches	5	5	5	$5\frac{1}{2}$	$5\frac{3}{4}$
Weight each about, lbs.	$2\frac{1}{2}$	3	$3\frac{1}{2}$	$4\frac{1}{4}$	5
Per lb.	\$0.40	.40	.40	.40	.40
Size of Face, inches	$\pm 3\frac{1}{4}$	$3\frac{1}{2}$	$\pm 3\frac{3}{4}$	± 4	
Length about, inches	$5\frac{1}{2}$	$5\frac{3}{4}$	$5\frac{1}{2}$	$6\frac{1}{4}$	
Weight each about, lbs.	6	$6\frac{1}{2}$	7	8	
Per lb.	\$0.40	.40	.40	.40	

±No. SH—SQUARE POLISHED FACE AND HEAD.

Size of Face, inches	1	1 1/2	1 1/4	1 3/8	1 1/2	1 3/4	2
Length about, inches	5 1/4	5 1/4	5 1/2	5 1/2	5 3/4	6	6
Wgt. each about, lbs.	1 1/4	1 1/2	2	2 1/2	3	4	5
Per lb.	\$0.40	.40	.40	.40	.40	.40	.40

Packed Loose.



BLACKSMITHS' TOOLS.

FULLERS.

No. TF.

Solid Forged Steel, Oil Finished; Hardened Polished Bit.

FULLERS.

No. BF.

No. TF—TOP PATTERN; Round Shoulder, Oval Eye.

Length of Bit, inches.....	$\pm \frac{1}{4}$	$\pm \frac{5}{16}$	$\frac{3}{8}$	$\pm \frac{7}{16}$	$\frac{1}{2}$	$\pm \frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$\pm \frac{1 1}{16}$	$\frac{1 1}{4}$	$\pm \frac{1 3}{16}$	$\frac{1 1}{2}$	$\pm \frac{1 3}{16}$	2	$\pm \frac{2 1}{16}$	± 3
Length over all, inches.....	6	6	6	6	6	6	6	6 1/4	6 1/4	6 1/4	6 1/4	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Weight each about, lbs....	2	2 1/8	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	3	3 1/2	3 1/2	3 1/2	4	4 1/2	5	7
Per lb.....	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40

No. BF—BOTTOM PATTERN; Square Shoulder; Square Shank, for 1 inch Hole in Anvil.

Length of Bit, inches.....	$\pm \frac{1}{4}$	$\pm \frac{5}{16}$	$\frac{3}{8}$	$\pm \frac{7}{16}$	$\frac{1}{2}$	$\pm \frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$\pm \frac{1 1}{16}$	$\frac{1 1}{4}$	$\pm \frac{1 3}{16}$	$\frac{1 1}{2}$	$\pm \frac{1 3}{16}$	2	$\pm \frac{2 1}{16}$	± 3
Length over all, inches.....	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	5	5	5	5	5	5	5	5	5
Weight each about, lbs....	1 1/2	1 1/2	1 1/2	1 1/2	2	2 1/8	2 1/4	2 1/4	2 1/4	3	3 1/2	3 1/2	3 1/2	4	4 1/2	5	6	7 1/2
Per lb.....	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40

HARDIES.

Solid Forged Steel, Oil Finished, Hardened Bit or Face.

PLOW ANVILS.

No. H—Rounding Shoulder; Polished Bit; Square Shank.

Size of Shank, inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$\pm \frac{1 1}{16}$	$\pm \frac{1 1}{16}$
Length of Bit, inches	1 1/2	1 5/8	1 3/4	1 7/8	2	2	2
Length over all, inches	4	4	5 1/4	5 1/4	5 1/2	5 1/2	5 1/2
Wgt. each about, lbs	1 1/2	1 1/2	1	1 1/2	2	2	2 1/4
Per lb.....	\$0.40	.40	.40	.40	.40	.40	.40

Polished Round Head; Rounding Face and Shoulder; Round Tapering Shank.

No.....	PA
Face Diameter about, inches.....	3
Length over all, inches.....	5 3/4
Weight each about, lbs.....	4 1/2
Per pound.....	\$0.30

Packed Loose.



BLACKSMITHS' TOOLS.

Solid Wrought Steel; Drop Forged; Oil Finished.

REGULAR TONGS.



REGULAR, WITH STRAIGHT LIPS.

Nos.	8/18	8/20	8/22	8/24
Length, inches	18	20	22	24
Weight per dozen about, lbs.....	31	34	36	39
Per dozen	\$5.50	6.00	6.50	7.50

BOLT TONGS.



BOLT, WITH BOWED LIPS, HOLLOWED ENDS.

Nos.	±B4	±B5	±B6	±B8	B10	±B12	±B14	±B16	±B18	±B20
For Holding Round Iron, in....	$\frac{3}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{8}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
Length, inches	18	18	20	20	22	22	24	24	24	24
Weight per dozen about, lbs.....	31	31	34	34	36	36	39	39	39	39
Per dozen	\$5.00	5.00	6.00	6.00	7.00	7.00	7.50	7.50	7.50	7.50

±GAD TONGS.



BOWED LIPS, STRAIGHT ENDS.

Nos.	±G18	±G20	±G22	±G24
Length, inches	18	20	22	24
Weight per dozen about, lbs.....	24	27	36	40 $\frac{1}{2}$
Per Dozen	\$5.00	6.00	7.00	7.50

±PICK-UP TONGS.

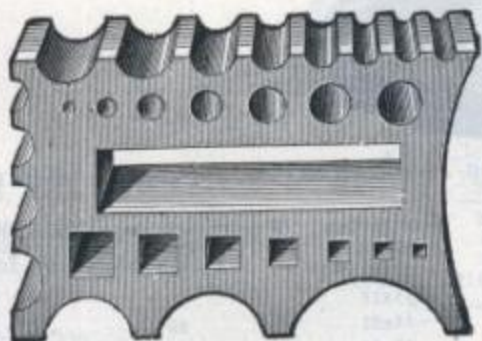


DOUBLE BOWED POINTED LIPS.

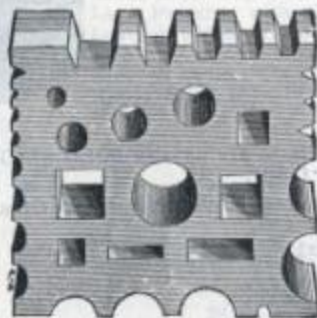
±No. P22—Length 22 inches; Weight per dozen about 34 $\frac{1}{2}$ lbs.....	Per Dozen \$7.00
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Packed Loose.

-266A-

±SWAGE BLOCKS.

No. 1.



No. 2.

±STANDARD.

Solid Cast Iron, Plain Finish, with Various Shaped Serrations on Edges, and with Various Shaped Perforations as shown.

Per Pound
 ±No. 1—19½ inches Long, 14 inches Wide, 4 inches
 Thick; Weight each about 153 lbs..... \$0.08

Per Pound
 ±No. 2—15 inches Long, 15 inches Wide, 4 inches
 Thick; Weight each about 145 lbs..... \$0.08

±SWAGE BARS.±STANDARD.

Solid Forged High Carbon Steel, Polished and Oiled Finish; Octagon, Tapering Pattern; Hardened and Tempered.

	Each
±No. 14/SB—14 inches Long, 2 inches Diameter at Large End, 1 inch Diameter at Small End; Weight each about 7¾ lbs.	\$9.00
±No. 12/SB—12 inches Long, 1¾ inches Diameter at Large End, ¾ inches Diameter at Small End; Weight each about 5⅞ lbs.	6.30
±No. 10/SB—10 inches Long, 1½ inches Diameter at Large End, ½ inch Diameter at Small End; Weight each about 2¾ lbs.	4.20

Packed Loose.



SURFACE PLATES.

STANDARD; Cast Iron.



These Plates are usually SOLD SINGLY, NOT IN PAIRS, AS SHOWN IN CUT. Prices are for Single Plates with Box and Cover.

No.	Size, inches.	Weight each about, lbs.	Each.	No.	Size, inches.	Weight each about, lbs.	Each.
<u>1</u>	$3\frac{1}{2} \times 4$	3	\$ 5.00	<u>20</u>	12x24	100	\$ 70.00
<u>2</u>	$3\frac{1}{2} \times 12$	10	10.00	<u>21</u>	14x14	50	44.00
<u>3</u>	4 x 15	20	14.50	<u>22</u>	14x18	65	58.00
<u>4</u>	$4\frac{1}{2} \times 6$	5	6.50	<u>23</u>	14x21	95	70.00
<u>5</u>	5 x 16	25	19.00	<u>24</u>	15x30	160	108.00
<u>6</u>	6 x 6	10	8.50	<u>25</u>	16x16	65	58.00
<u>7</u>	6 x 12	20	17.00	<u>26</u>	16x48	380	198.00
<u>8</u>	6 x 26	50	34.00	<u>27</u>	18x18	80	74.00
<u>9</u>	6 x 50	120	74.00	<u>28</u>	18x24	130	100.00
<u>10</u>	$6\frac{1}{2} \times 18$	30	30.00	<u>29</u>	18x36	230	132.00
<u>11</u>	7 x $7\frac{1}{2}$	10	12.50	<u>30</u>	20x30	215	144.00
<u>12</u>	7 x 10	15	16.00	<u>31</u>	22x80	1070	478.00
<u>13</u>	8 x 12	20	22.00	<u>32</u>	24x24	200	136.00
<u>14</u>	9 x 9	20	18.00	<u>33</u>	24x36	300	208.00
<u>15</u>	9 x 14	30	28.00	<u>34</u>	24x48	445	280.00
<u>16</u>	10 x 15	35	24.00	<u>35</u>	24x60	670	364.00
<u>17</u>	10 x 30	100	72.00	<u>36</u>	30x36	430	262.00
<u>18</u>	12 x 12	30	32.00	<u>37</u>	36x68	1025	600.00
<u>19</u>	12 x 18	55	50.00				

One in a Wood Box.

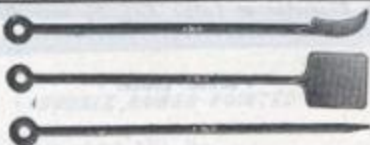
DOWEL PLATES.



No. 78—Cast Steel; Natural Finish; $6\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{8}$ inches; For $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$ and $\frac{1}{2}$ inch Dowels; Weight per dozen about 16½ lbs. Per Dozen \$3.50

One-half Dozen in a Cardboard Box.

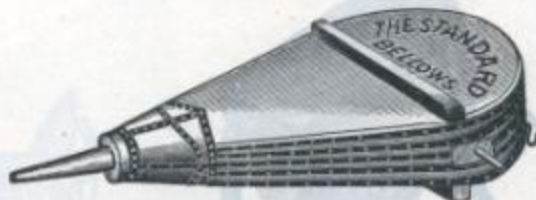
BLACKSMITHS' FIRE SETS.



High Grade Open Hearth Steel, Natural Finish.

No. 2750—Shovel, Poker and Scraper; SHOVEL 2 feet 4 inches Long, over all; Blade $4\frac{1}{2}$ inches Wide; $\frac{1}{2}$ inch Shank; POKER 2 feet 3 inches Long, over all; $\frac{1}{2}$ inch Shank; SCRAPER 2 feet 5 inches Long, over all; Blade $4\frac{1}{2}$ inches Wide; $\frac{1}{2}$ inch Shank; Weight per set about 5 lbs. Per Set \$2.00

Packed Loose.

BELLOWS.**STANDARD, BLACKSMITHS'.**

Hardwood Outside Boards, Cross Cleated, Painted Red; Japanned Sheet Steel Cap and Funnel; Five Leaf Pattern, with Cowhide Split Leather Sides or Folds; Trimmed with $\frac{1}{4}$ inch Wood Mouldings, Secured with Chemically Coated Nails; Steel Side Pivots and Rear Hook.

No. B—Regular Length.

Width, inches	24	26	28	30	32	34	36	38	40
Length, inches	46	49	52	55	58	61	64	67	70
Thickness Closed, inches	5	5	5	5	5 $\frac{1}{4}$	5 $\frac{1}{4}$	5 $\frac{1}{4}$	5 $\frac{1}{4}$	5 $\frac{1}{4}$
Weight each about, lbs.	35	42	48	54	75	78	83	85	97
Each	\$10.00	11.00	12.00	13.00	14.00	16.00	18.00	20.00	23.00

No. A—Extra Length.

Width, inches	36	38	40
Length, inches	73	76	80
Thickness Closed, inches	5 $\frac{1}{4}$	5 $\frac{1}{4}$	5 $\frac{1}{4}$
Weight each about, lbs.	95	110	115
Each	\$21.00	24.00	28.00

**STANDARD, MOULDERS'.**

Made of Kiln-Dried Lumber, Covered with Heavy Sheepskin Leather; Galvanized Iron Nozzle firmly fastened to end of Bellows.

No.	M8	M10	M12	M14	M16
Size, inches	8	10	12	14	16
Wgt. doz. about, lbs.	25	35	50	65	80
Per dozen	\$16.00	20.00	26.00	32.00	36.00

Packed Loose.

BORAX.

No. B—PURE CRUSHED BORAX, for Welding Purposes; in Burlap Sacks Containing about 100 lbs each.	Per Pound
	\$ 0.30
Sold in Bulk as Desired.	

**STANDARD, HAND.**

Single Fold; Hardwood Outside Boards, Painted Red; With Handle Extensions and Leather Loop for Fastening; Japanned Sheet Steel Cap and Funnel; Rough Leather Sides or Folds; Faced with Plain Leather Strips and Studded with Tacks; $1\frac{1}{2}$ inch Hole in Bottom, with Leather Valve Flap.

No. H—HAND.

Width, inches	8	10	12
Length, inches	17 $\frac{1}{4}$	19	20 $\frac{1}{4}$
Thickness, Closed, inches	2	2	2
Weight per dozen about, lbs.	18	26	36
Per dozen	\$10.50	12.00	15.00

WELDING COMPOUND.**CHERRY HEAT WELDING COMPOUND.**

Coarse Granulated Mixture, for Steel, Iron or Malleable Iron.

Nos.	CH25	CH50	CH100
In Wood Boxes Containing, lbs.	25	50	100
Per lb.	\$0.25	.25	.25

CLIMAX WELDING COMPOUND.

A Granulated Mixture, for all Grades of Steel.

Nos.	C25	C50	C100
In Wood Boxes Containing, lbs.	25	50	100
Per lb.	\$0.20	.20	.20

Sold Only in Full Boxes.



FOOT BELLOWS.



Made of Kiln-Dried Maple, Covered with Selected Sheepskin Leather; Pure Rubber Disks. Six Feet Rubber Tubing Included. Each

- No. 10**—WITH ONE DISK; Suitable for Ordinary Blow-pipe Works; Sufficient Pressure to produce a Small Blue Pointed Jet or Reducing Flame; Weight each about 10 lbs. \$5.50
- No. 10A**—WITH TWO DISKS; Suitable for Larger Blow-pipes or Small Melting Furnaces; Weight each about 14 lbs. 7.00
- No. 10B**—WITH THREE DISKS; Suitable for the Largest Blow-pipe and Melting Furnaces; Will Furnish a Blast capable of Burning 60 feet of Gas or more in a furnace or upwards of 100 feet per hour in a Blow-pipe; Weight each about 22 lbs. 9.50

Packed Loose.

TABLE OF SIZES AND CAPACITY OF FOOT-BLOWERS.

No.	Size of Boards, inches.	Diam. of Air Reservoir, inches.	Pressure of Blast per inch, lbs.	Cubic feet of Air per hour.
10	7 $\frac{1}{2}$ x 9	7 $\frac{1}{4}$	1	190
10A	10 x 11	9	1 $\frac{1}{2}$	330
10B	11 $\frac{1}{2}$ x 13 $\frac{1}{4}$	11	1 $\frac{3}{4}$	625

TUYERE IRONS.

DUCK'S NEST.



Cast Iron; Natural Finish Head and Neck; Entire Iron Bolted Together.

Per Dozen

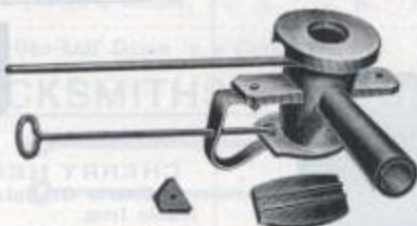
- No. 5**—LIGHT WEIGHT; ROUND FLAT HEAD
7 $\frac{1}{4}$ inches Diameter; Diameter of Hole 3 $\frac{1}{2}$
inches; Length over all 13 $\frac{1}{2}$ inches; Weight
per dozen about 108 lbs. \$8.50



Cast Iron; Japanned Finish Head and Neck.

Per Dozen

- No. 6**—DUCK'S NEST; HEAVY WEIGHT;
ROUND FLAT HEAD 7 $\frac{1}{4}$ inches Diameter;
Made in Two Pieces, Bolted together; Diam-
eter of Hole 4 inches; Length over all 14
inches; Weight per dozen about 204 lbs. \$15.00



BALL VALVE.

Cast Iron, Japanned; Extra Heavy, with Tapering Funnel; Revolving Triangular Ball Valve to Regulate the Flow of Air. Per Dozen

- No. N**—NORTON; ONE PIECE CYLINDRICAL BODY; Round Top Plate 6 $\frac{1}{2}$ inches Diameter; With 2 $\frac{1}{4}$ inch Round Opening; Funnel 7 $\frac{1}{2}$ inches Long, with 2 $\frac{1}{4}$ inch Inlet; 3 $\frac{1}{2}$ inch Bottom Opening, with Sliding Cover and Spring Steel Guide, with 23 inch Steel Rods to work Valve and Cover; Length over all (except Rods) 12 $\frac{1}{4}$ inches; Height 8 $\frac{1}{4}$ inches; Weight per dozen about 336 lbs. \$28.00

Packed Loose.

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FORGES.

PORTABLE.



Pressed Sheet Steel Bowl and Wind-Guard; Three Legs; Complete with Blower and Running Gear.

Each

- No. 7—BUFFALO BENCH;** Hand Gear Wheel Action; Concave Bent 13 inch Legs; Spread at Base 18 inches; Height over all 21 inches, to Top of Bowl 15 inches; Bowl 15 inches Diameter; Large Gear Wheel 12 inches in Diameter; Fan 6 inches in Diameter; Painted Black; Weight each about 40 lbs.....\$16.00



Each

- No. 100—LANCASTER RIVETERS' OR CONTRACTORS';** Lever Action; Tubular Steel Braced Legs; Spread at Base 28 inches; Height over all 43 inches, to Top of Bowl 31 inches; Bowl 21 inches Diameter; Large Belt Wheel 15 inches Diameter; Fan 9 inches Diameter; Painted Red; Weight each about 80 lbs.\$24.00



BUFFALO.

Heavy Pressed Sheet Steel Bowl and Hood or Guard; Four Tubular Steel Braced Legs; Spread at Base 20x20 inches; Complete with Blower and Lever Action Running Gear; Bent Hardwood Lever; Height to Top of Bowl 33 inches; Bowl 18 inches Diameter; Large Gear Wheel 12 inches Diameter; Fan 6 inches Diameter; Painted Black.

Each

- No. 5—RIVETERS' OR CONTRACTORS', WITH WIND-GUARD;** Height over all 43 inches; Weight each about 65 lbs.....\$24.00



Each

- No. 4—TOOLMAKERS', WITH HALF OPEN HOOD;** Height over all 52½ inches; Weight each about 70 lbs.....\$27.00



BUFFALO.

Heavy Pressed Sheet Steel Bowl and Hood or Guard; Four Tubular Steel Spread Legs; Complete with Blower and Running Gear; Painted Black.

Each

- No. 0—BLACKSMITHS', LEVER ACTION, WITH HALF OPEN HOOD;** Bent Hardwood Lever; Height over all 60 inches, to Top of Bowl 32 inches; Bowl 28x40 inches; Large Gear Wheel 20 inches Diameter; Fan 10 inches Diameter; Spread of Legs at Base 41x28 inches; Weight each about 255 lbs.....\$50.00



Each

- No. 625—CONTRACTORS', CRANK ACTION, WITH WIND-GUARD;** Enclosed Double Gearing, Counter-balanced Crank; Height over all 45 inches, to Top of Bowl 35 inches; Bowl 18 inches Diameter, 5 inches Deep; Fan 10 inches in Diameter; Spread of Legs at Base 17x31 inches; Weight each about 125 lbs.\$35.00

One in a Crate.

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FORGES.

PORTABLE.



±BUFFALO.

Heavy Pressed Sheet Steel Bowl and Hood, or Guard; Four Tubular Steel Legs, Spread at Base 20x27 inches; Complete with Blower and Lever Action Running Gear; Bent Hardwood Lever; Height to Top of Bowl 31 inches; Bowl 27x21 inches; Large Gear and Belt Wheels 16 inches in Diameter; Fan 10 inches in Diameter; Painted Black.

±No. 3—CONTRACTORS' WITH WIND GUARD and
Four Cast Iron Lift Handles; Height over all 44
inches; Weight each about 140 lbs Each
\$36.00

±No. 1—MACHINISTS' WITH HALF OPEN HOOD.
Height over all 54 inches; Weight each about
145 lbs Each
\$40.00

STANDARD.

For Farmers and Contractors.



Pressed Sheet Steel
Bowl and Hood, or Guard;
Four Tubular Steel Braced
Legs, 20x20 inch Spread
at Base; Complete with
Blower and Lever Action
Running Gear; Bent Hard-
wood Lever; Large Belt
Wheel 14 inches Diameter;
Painted Red.



No. 150—STANDARD. WITH WIND-GUARD; Each
Height over all 42 inches, to Top of Bowl
30 inches; Diameter of Bowl 18 inches; Fan 7
inches; Weight each about 81 lbs.....\$16.80

No. 151—STANDARD. WITH HALF-HOOD; Each
Height over all 49 inches, to Top of Bowl
30 inches; Diameter of Bowl 18 inches; Fan
7 inches; Weight each about 100 lbs.....\$19.00

One in a Crate.

-373- **BLOWERS.**



STANDARD.

Plain Bearing; Three Tubular Steel Bent Legs, 25 inch Spread at Base; Crank Movement, with 14 inch Counter-balanced Crank; Dust Proof Closed Cast Gear Casing, which also serves as an Oil Well; Adjustable Cast Iron Fan Casing; Complete with 15 lb. Ball Valve Teyere Iron; Entire Blower painted Black.

Double Gear; Cast Gear Wheels and Steel Shaft; Plain Bushings; Height over all, adjustable from 45 to 49½ inches; Gear Casing 11 inches High; Fan 12 inches Diameter.

No. 01—STANDARD; Weight each, complete, Each
about 115 lbs. \$21.00

BUFFALO.

Ball Bearing; Three Tubular Steel Bent Legs, 25 inch Spread at Base; Crank Movement, with 15 inch Counter-balanced Crank; Height Adjustable; Dust Proof Closed Cast Gear Casing, which also serves as an Oil Well; Standard Adjustable Cast Iron Scroll Fan Casing; Complete with 25 lb. Ball Valve Teyere Iron.

No. 100—PAINTED RED, SPIRAL GEAR; Deep Cut Brass Wheels and Steel Shafts; Brass Bushings; Height over all, Adjustable, from 42 to 46 inches; Gear Casings 7 inches High; Fan 10 inches Diameter; Weight each, Complete, about 115 lbs. \$35.00

No. 200—PAINTED BLACK, TRIPLE GEAR; Deep Cut Cast Gear Wheels and Steel Shafts; Plain Bushings; Height over all, Adjustable, from 43½ to 47½ inches; Gear Casing 13 inches High; Fan 9¾ inches Diameter; Weight each, Complete, about 95 lbs. 35.00

One in a Crate.



No. 100.



No. 200.

BOLT CLIPPERS.



Tempered Oil Finish; Detachable Cast Steel Cutting Jaws; Japanned Cast Iron Compound Lever Handles with Socket Joints; Rubber Bumpers between Handles.

"EASY."

Nos.	1E	2E
Length, inches	24	30
Cut Bolts up to, inches	¾	1½
Weight per pair about, lbs.	4¼	7½
Per pair	\$5.00	7.00

±Extra Jaws for "Easy" Bolt Clippers.

Nos.	±1E	±2E
Per pair	\$1.85	2.35

"NEW EASY."

Nos.	1NE	2NE	3NE
Length, inches	24½	30	36
Cut Bolts up to, inches	¾	1½	¾
Weight per pair about, lbs.	5¼	8¾	11½
Per pair	\$5.00	7.00	9.00

±Extra Jaws for "New Easy" Bolt Clippers.

Nos.	±1NE	±2NE	±3NE
Per pair	\$1.85	2.35	3.00

Packed Loose.

TIRE MEASURING WHEELS.



No. 606—GREEN RIVER; Forged Steel Wheel, Natural Finish; Polished Steel Index Hand; Japanned Malleable Iron Handle and Fork; Steel Screw Axle; Wheel 24 inches in Circumference, Graduated in inches and 8ths; Weight per dozen about 15 lbs. \$18.00
One-quarter Dozen in a Cardboard Box.

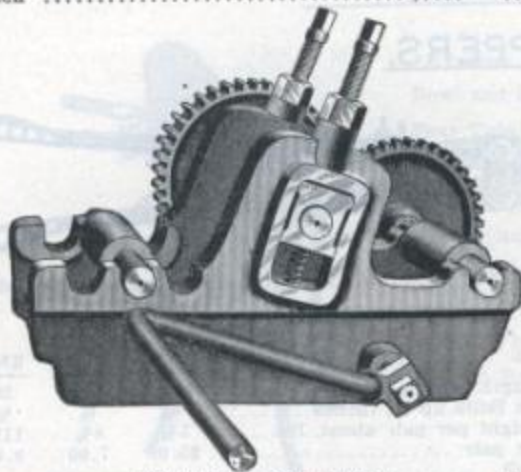
TIRE BENDERS.

Japanned Cast Iron Frame and Gear Wheels; Wrought Iron Crank; Turned Steel Rollers and Axles; Will Bend Tires to a Circle of 30 inches or Larger.



GEARED.

Nos.	2	2 1/4
Will Bend Tires up to, inches.....	3 1/4	4 1/2
Length of Crank, inches.....	15	15
Diameter of Drive Wheel, inches.....	10 1/2	10 1/2
Length over all, inches.....	22 1/2	26
Width over all, inches.....	11	14
Height over all, inches.....	12	13
Weight each about, lbs.....	80	113
Each.....	\$7.00	7.75



DOUBLE GEARED.

No. 3—Length of Crank 17 inches; Will Bend 5 inch Tires or Smaller; Diameter of Large Drive Wheel 10 inches; Length over all 24 1/2 inches; Width over all 17 inches; Weight each about 154 lbs. \$10.50
Packed Loose.

TIRE SHRINKERS.



MOLE'S PATTERN.

Painted Cast Iron Frame and Bed; Plain Hardwood Handle.

Nos.	101	102	103
For Tires up to, inches.....	1 1/2 x 2	1 1/2 x 3	1 1/2 x 4
Length of Bed, inches.....	29	30	32
Length of Handle, inches.....	58	59	60
Height over all, inches.....	30	33	36
Length over all, inches.....	38	40	44
Weight each about, lbs.....	120	180	265
Each.....	\$16.00	21.00	25.00



STODDARD'S UPRIGHT.

Drab Painted Cast Iron Frame, Jaws and Handle.

No.	1	2	3	4	5
For Tires up to	1 1/2 x 2 inches	1 1/2 x 4 inches	1 1/2 x 4 inches	1 1/2 x 6 inches	2 x 6 inches
Handle	13 inches	14 inches	14 inches	15 1/2 inches	18 inches
Height over all	16 1/2 inches	20 inches	20 1/2 inches	21 1/2 inches	24 inches
Weight each about	100 lbs.	225 lbs.	275 lbs.	400 lbs.	450 lbs.
Each	\$14.00	22.50	26.00	36.00	45.00

Packed Loose.

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KING'S BLACKSMITH'S STOCKS AND DIES.



Finest Tool Steel.



No. 15 SET—3 Sets of Adjustable Dies; 5 Taper
Taps; Stock 33½ inches Long \$10.00

CUTTING SIZES.

Inches..... 1/2 5/8 3/4 7/8 1 1 1/4 R. H.
Threads to Inch..... 12 12 10 10 8

No. 21 SET—3 Sets of Adjustable Dies; 4 Taper
Taps; Stock 26½ inches Long \$6.00

CUTTING SIZES.

Inches..... 5/8 3/4 1 R. H. 1 L. H.
Threads to Inch..... 12 12 9 9

No. 23 SET—3 Sets of Adjustable Dies; 3 Taper
Taps; Stock 27 inches Long \$5.00

CUTTING SIZES.

Inches..... 1/2 3/4 1 R. H.
Threads to Inch..... 14 10 9

No. 34 SET—3 Sets of Adjustable Dies; 3 Taper
Taps; Stock 22 inches Long \$4.50

CUTTING SIZES.

Inches..... 7/16 5/8 3/4 R. H.
Threads to Inch..... 16 12 10

No. 34A SET—3 Sets of Adjustable Dies; 3 Taper
Taps; Stock 22 inches Long \$4.50

CUTTING SIZES.

Inches..... 7/16 5/8 3/4 R. H.
Threads to Inch..... 16 12 10

No. 35 SET—2 Sets of Adjustable Dies; 2 Taper
Taps; Stock 22 inches Long \$4.00

CUTTING SIZES.

Inches..... 1/2 5/8 R. H.
Threads to Inch..... 14 10

No. 37 SET—3 Sets of Adjustable Dies; 6 Taper
Taps; Stock 19 inches Long \$4.25

CUTTING SIZES.

Inches..... 1/4 5/16 3/8 7/16 1/2 5/8 R. H.
Threads to Inch..... 22 22 18 18 14 14

No. 37A SET—3 Sets of Adjustable Dies; 6 Taper
Taps; Stock 18 inches Long \$4.25

CUTTING SIZES.

Inches..... 1/4 5/16 3/8 7/16 1/2 5/8 R. H.
Threads to Inch..... 16 16 14 14 12 12

No. 37B SET—3 Sets of Adjustable Dies; 6 Taper
Taps; Stock 19 inches Long \$4.25

CUTTING SIZES.

Inches..... 1/4 5/16 3/8 7/16 1/2 5/8 R. H.
Threads to Inch..... 18 18 16 16 14 14

No. 41 SET—3 Sets of Adjustable Dies; 6 Taper
Taps; Stock 15 inches Long \$3.25

CUTTING SIZES.

Inches..... 3/16 1/4 1/2 5/16 7/16 1/2 R. H.
Threads to Inch..... 20 20 20 20 16 16

No. 41A SET—3 Sets of Adjustable Dies; 6 Taper
Taps; Stock 14½ inches Long \$3.25

CUTTING SIZES.

Inches..... 1/4 5/16 3/8 7/16 1/2 R. H.
Threads to Inch..... 18 18 16 16 14

No. 41B SET—3 Sets of Adjustable Dies; 6 Taper
Taps; Stock 15 inches Long \$3.25

CUTTING SIZES.

Inches..... 3/16 1/4 1/2 5/16 7/16 1/2 R. H.
Threads to Inch..... 20 20 18 18 16 16

No. 43 SET—3 Sets of Adjustable Dies; 4 Taper
Taps; Stock 15 inches Long \$3.00

CUTTING SIZES.

Inches..... 1/4 5/16 3/8 7/16 1/2 R. H.
Threads to Inch..... 20 20 16 16 16

No. 53 SET—4 Sets of Adjustable Dies; 4 Taper
Taps; Stock 11 inches Long \$2.75

CUTTING SIZES.

Inches..... 1/8 3/16 1/4 5/16 R. H.
Threads to Inch..... 32 24 20 16

No. 55 SET—3 Sets of Adjustable Dies; 4 Taper
Taps; Stock 11 inches Long \$2.50

CUTTING SIZES.

Inches..... 1/8 3/16 1/4 5/16 R. H.
Threads to Inch..... 32 32 24 18



No. 19 SET—3 Pairs of Adjustable Dies; 6 Taper
Taps; Stock 25 inches Long \$9.00

CUTTING SIZES.

Inches..... 1/2 5/8 3/4 7/8 1 R. H.
Threads to Inch..... 14 12 14 12 9

No. 27 SET—3 Pairs of Adjustable Dies; 6 Taper
Taps; Stock 21 inches Long \$6.50

CUTTING SIZES.

Inches..... 7/16 1/2 5/8 3/4 R. H.
Threads to Inch..... 16 16 12 10 12 10

No. 45 SET—3 Pairs of Adjustable Dies; 6 Taper
Taps; Stock 18 inches Long \$5.50

CUTTING SIZES.

Inches..... 3/16 5/16 1/2 5/8 R. H. 7/16 1/2 5/8 L. H.
Threads to Inch..... 16 16 12 12 12 12 12 12

All with V Threads; One Set in a Package; For Extra Taps for above, see Page 376.

No. 60 SET—4 Pairs of Adjustable Dies; 6 Taper
Taps; Stock 21 inches Long \$6.50

CUTTING SIZES.

Inches..... 1/4 5/16 3/8 7/16 1/2 5/8 3/4 R. H.
Threads to Inch..... 18 18 14 14 12 12 10

TABLE OF WEIGHTS.

No.	15	21	23	34	34A	37	37A	37B	41
Weight per Set about, lbs.	15	9 5/8	8 3/4	5	5	5 1/2	4 3/4	3 3/4	2 3/4
No.	41A	41B	43	53	55	55A	55B	55C	55D
Weight per Set about, lbs.	2 1/2	2 1/2	2 1/2	1	1	1 1/2	6	4 1/2	4

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BLACKSMITHS' TAPS.



Taper.



Plug.

RIGHT HAND.

Finest Tool Steel; Actual Size V Thread.

Taper.

Size, inches	1/8	3/16	1/4	5/16	3/8	7/16
Threads to inch	32	24, 26	16, 18, 20, 22, 24	14, 16, 18, 20, 22	12, 14, 16, 18, 20	12, 14, 16
No. in Package	6	6	6	6	6	6
Each	\$0.30	.30	.30	.30	.35	.40
Size, inches	1/2	9/16	5/8	3/4	7/8	1
Threads to inch	10, 12, 14, 16	12	10, 11, 12, 14	10, 12	9	8, 9
No. in Package	6	6	6	6	4	2
Each	\$0.40	.50	.50	.65	.90	1.25

Plug.

Size, inches	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
Threads to inch	32	24	20	18	16	14	12, 14	11	10	8
No. in Package	6	6	6	6	6	6	6	6	6	2
Each	\$0.30	.30	.30	.30	.35	.40	.40	.50	.65	1.25

Weight Each about, 1/4 inch, 1/2 oz.; 5/16 inch, 2 ozs.; 1 inch, 14 ozs.

For Stocks and Dies, See Page 375.

MACHINE OR SOLID BOLT DIES.

RIGHT HAND.

Finest Tool Steel; Actual Size V Thread.

Size, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Threads to inch	20	18	16	14	12	11	10	9	8
Size of Square, inches	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
Thickness, inches	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1
Each	\$1.80	1.80	1.80	1.80	1.80	2.00	2.25	2.40	2.70

Weight Each about, 1/4 inch, 1 lb.; 1/2 inch, 1 1/4 lb.; 1 inch, 1 1/2 lbs.



PUMP PLATES.



Japanned Cast Steel Frame and Handles; Tool Steel Dies and Set Screws.

No. 12—15 INCHES LONG; 2 Pairs of Adjustable Dies; without Taps; Cutting; Weight each about 1 1/4 lbs.

Size, inches 3/8 7/16 1/2 } Each

Threads to inch 14 12 } \$3.00

No. 13—18 INCHES LONG; 3 Pairs of Adjustable Dies; without Taps; Cutting; Weight each about 2 1/2 lbs.

Size, inches 3/8 7/16 1/2 } Each

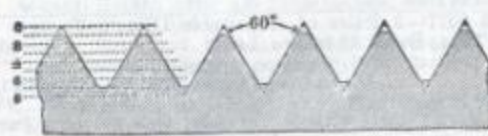
Threads to inch 14 12 } \$3.50

All with V Threads.
Packed Loose.

V Thread or Standard.



U. S. or Franklin Institute Standard.



Cut showing Pitch of Taps and Dies.

Cut showing Pitch of Taps and Dies.

Table Showing the Standard Number of Threads for the Respective Sizes of Taps.

Size, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Threads to inch	20	18	16	14	12	11	10	9	8	7	6	5 1/2	5

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MACHINISTS' SCREW PLATES.



No. 00A.

No. 00M SET, CARD'S—Stock 6 inches Long; 4 Plug
Taps, and 4 Pairs of Adjustable Dies.

CUTTING SIZES.					Per Set
Inches	Threads to inch	1/16	1/8	3/16	
64	56	48	40	32	\$2.50

No. 00A SET, CARD'S—Stock 6 inches Long; 4 Plug
Taps, and 3 Pairs of Adjustable Dies.

CUTTING MACHINE SCREWS.					Per Set
Screw Gauge	Threads to inch	4	6	8	
10	36	32	32	24	\$2.50

Weight per Set about, Nos. 00M and 00A, 1/2 lb.; No. 0M, 3/4 lb.; No. 1 1/2, 1 lb.

CARD'S.

Finest Tool Steel; In Sets,
Complete; One Set in a
Hardwood Case.



No. 1 1/2C.

No. 0M SET, CARD'S—Stock 7 1/2 inches Long; 4 Plug
Taps, and 4 Pairs of Adjustable Dies.

CUTTING SIZES.					Per Set
Inches	Threads to inch	1/16	1/8	3/16	
56	40	24	20	16	\$3.00

No. 1 1/2C SET, CARD'S—Stock 9 inches Long; 4 Plug
Taps, and 4 Pairs of Adjustable Dies.

CUTTING MACHINE SCREWS.					Per Set
Screw Gauge	Threads to inch	6	8	10	
14	32	30	24	20	\$3.25



No. 2 1/2C.

No. 3DC SET, CARD'S—Stock 14 inches Long; 6 Taper
Taps, 6 Pairs of Adjustable Dies.

CUTTING SIZES.					Per Set
Inches	Threads to in.	1/4	3/8	1/2	
20	18	16	14	12	\$9.60

No. 2 1/2C SET, CARD'S—Stock 11 1/2 inches Long; 5
Taper Taps, and 5 Pairs of Adjustable Dies.

CUTTING SIZES.					Per Set
Inches	Threads to inch	1/4	3/8	1/2	
20	18	16	14	12	\$7.50

No. 8A SET, CARD'S—Stock 30 inches Long; 4 Taper
Taps, and 4 Pairs of Adjustable Dies.

CUTTING SIZES.					Per Set
Inches	Threads to inch	1/4	3/8	1/2	
10	9	8	7	6	\$16.50

Weight per Set about, No. 2 1/2A, 2 lbs.; No. 2 1/2C, 2 1/2 lbs.;
No. 8A, 26 lbs.

No. 3DC, 4 lbs.

Card's Diamond; With Smith's Round Adjustable Dies
1 1/16 inch in Diameter.

No. 21 SET, CARD'S—Stock 14 inches Long; 6 Taper
Taps, and 6 Adjustable Dies.

CUTTING SIZES.					Per Set
Inches	Threads to in.	1/4	3/8	1/2	
24	20	18	16	14	\$9.60

No. 23C SET, CARD'S—Stock 14 inches Long; 4 Taper
Taps, and 6 Adjustable Dies.

CUTTING SIZES.					Per Set
Inches	Threads to inch	1/4	3/8	1/2	
20	18	16	12	10	\$7.00

Weight per Set about 4 lbs.

(For Price of Extra Dies
see Page 378.)

(For Price of Extra Taps
[Machinists' Hand Taper.]
see Page 386.)



SCREW PLATES.



BICYCLE.

Round Adjustable Dies for making tight or loose fits; with Tap Wrench.

No. 1BC SET, CARD'S—Stock 5 inches Long; 6 Plug Taps, and 6 Dies, corresponding in Sizes with Bicycle Spokes.

Inches	1/4	3/8	1/2
Threads to inch	40	42	54
Screw Gauge	6	3	3
Threads to inch	28	48	56

Weight per Set about 1/4 lb.

No. 2BC SET, CARD'S—Stock 5 inches Long; 6 Plug Taps, and 6 Dies, corresponding in Sizes with Bicycle Spokes.

Inches	3/32	7/64	9/64
Threads to inch	56	56	40
Screw Gauge	1 1/2	1	2
Threads to inch	56	64	48

Weight per Set about 3/4 lb.

No. 3BC SET, CARD'S—Stock 5 inches Long; 14 Plug Taps, and 14 Dies, corresponding in Sizes with Bicycle Spokes.

Inches	3/32	7/64	9/64	1/4
Threads to inch	52	54	56	56
Inches	1/4	3/8	1/2	5/8
Threads to inch	40	42	40	..
Screw Gauge	1	1 1/2	2	3
Threads to inch	64	56	48	48
Screw Gauge	3	4	6	..
Threads to inch	56	42	38	..

Weight per Set about 1 1/4 lbs.

CARD'S.

Finest Tool Steel; In Sets Complete; One Set in a Hardwood Case.



BICYCLE.

No. 2 1/2 P SET, CARD'S—Stock 11 1/2 inches Long; 10 Pairs Adjustable Dies, 1 Tap Wrench Die, and 8 Bicycle Taper Taps 6 inches Long.

CUTTING SIZES.

Inches	1/4	3/8	1/2
Threads to inch	20, 22, 24	26, 28, 30	20, 22, 24
Inches	5/16	3/4	7/8
Threads to inch	26, 28, 30	20, 22, 24	26, 28, 30
Inches	1/2	5/8	3/4
Threads to inch	20, 24	20, 24	20, 24

Weight per Set about 6 lbs.

CARD'S BICYCLE TAPER TAPS.



Size, inches	5/16	3/8	7/16
Threads to inch	24, 28	24	24
Each	.50	.55	.60
Size, inches	1/2	9/16	5/8
Threads to inch	20, 24, 28, 32	20, 24, 28, 32	20, 24, 28, 32
Each	\$0.70	.80	.90

The Diameter given is that of the Largest Part of the Taps. Average Weight each about 1/4 lb. All V Threads.

CARD'S TAP WRENCHES.

Finest Tool Steel.



No. 0—5 INCHES LONG, Fitting Taps, 1/16 to 3/16 in.	Each \$1.00
No. 1—7 1/2 INCHES LONG, Fitting Taps, 1/8 to 3/8 in.	1.50
No. 2—12 INCHES LONG, Fitting Taps, 1/4 to 1/2 in.	2.00
No. 3—14 INCHES LONG, Fitting Taps, 1/2 to 3/4 in.	3.00
No. 4—19 INCHES LONG, Fitting Taps, 3/4 to 1 1/4 in.	4.00

Weight Each about, No. 0, 1/4 lb.; No. 1, 1/2 lb.; No. 2, 1 lb.; No. 3, 2 lbs.; No. 4, 4 lbs.

SMITH'S ROUND ADJUSTABLE DIES.

Finest Tool Steel.



Can be adjusted for exact or over size, by Screw in Side; V Threads.

13/16 inch DIAMETER.									
Cutting Size, Screw Gauge	Nos.	4	8	12					
Threads to inch	36	32	24						
Each		\$0.40	.40	.40					
1 1/8 inch DIAMETER.									
Cutting Size, inches	1/8	9/64	5/32	3/16	1/4	5/16	3/8	7/16	1/2
Threads to inch	40	40	32	24	20	18	16	14	12
Each	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40
1 1/4 inch DIAMETER.									
Cutting Size, inches	3/16	1/4	5/16	3/8	7/16				
Threads to inch	24	20	18	16	14				
Each	\$1.00	1.00	1.00	1.00	1.00				

Packed Loose; Weight Each about 1/4 lb.

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LIGHTNING SCREW PLATES.



For Bolts.

Finest Tool Steel; in Sets Complete; One Set in a Hardwood Case.

No. K7 SET—With 1 Stock each 18 and 23 inches Long;
7 Sizes Taps, Dies and Collets.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$	} \$16.00
Threads to inch..	20 18 16 14 12 11 10	

Weight per Set about 20 lbs.

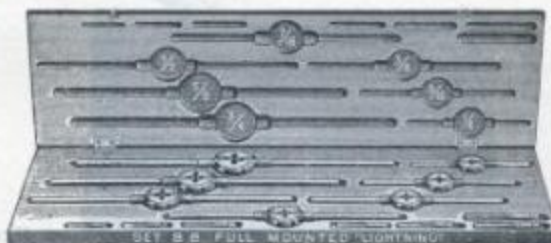
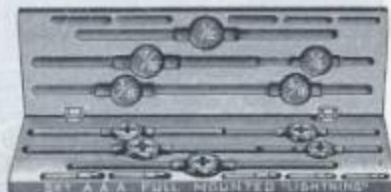
Extra Stocks only, for No. K7 Set; Weight each
about $2\frac{1}{2}$ lbs..... \$2.00

No. L9 SET—With 1 Stock each 18 and 29 inches Long;
9 Sizes Taps, Dies and Collets.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$	} \$25.25
Threads to inch..	20 18 16 14 12	
Inches	$\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$ 1	} \$25.25
Threads to inch..	11 10 9 8	

Weight per Set about 28 lbs.

Extra Stocks only, for No. L9 Set; Weight each
about 3 lbs..... \$2.00

Diameter of Collets in these Sets, $\frac{7}{16}$ inch and under, $2\frac{3}{16}$ inches; $\frac{1}{2}$ inch and over, $2\frac{1}{4}$ inches.

For Bolts.

Finest Tool Steel; in Sets Complete; One Set in a Hardwood Case.

Full Mounted, with Suitable Stock for Each Size Die.

No. AAA SET—With 5 Stocks; 5 Sizes Taper Taps and
Dies.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$ $\frac{1}{2}$	} \$11.00
Threads to inch..	20 18 16 14 12	

Weight per Set about 13 lbs.

No. BB SET—With 7 Stocks; 7 Sizes Taper Taps and
Dies.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$	} \$16.00
Threads to inch..	20 18 16 14 12 11 10	

Weight per Set about 23 lbs.

No. CCC SET—With 9 Stocks; 9 Sizes Taper Taps and
Dies.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$ $\frac{1}{2}$	} \$26.50
Threads to inch..	20 18 16 14 12	
Inches	$\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$ 1	} \$26.50
Threads to inch..	11 10 9 8	

Weight per Set about 37 lbs.

For Prices of Extra Taps and Dies for Lightning Screw Plates, see Page 382.



LIGHTNING SCREW PLATES.



Finest Tool Steel; In Sets Complete; One Set in a Hardwood Case.



No. AA SET—Stock 18 inches Long, with 6 Sizes Taper Taps, and 6 Dies and Collets; Diameter of Collets $2\frac{3}{16}$ inches.

		CUTTING SIZES.						Per Set
Inches	Threads to inch	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{7}{16}$	$\frac{1}{2}$	
24	20	18	16	14	12			\$11.75

Weight per Set about 12 lbs.

Extra Stocks only for No. AA Set; Weight each
about 2 lbs. \$2.00

No. B SET—Stock 23 inches Long, with 7 Sizes Taper Taps, and 7 Dies and Collets; Diameter of Collets $2\frac{3}{4}$ inches.

		CUTTING SIZES.							Per Set
Inches	Threads to in.	$\frac{3}{4}$	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	
20	18	16	14	12	11	10			\$16.75

Weight per Set about 20 lbs.

Extra Stocks only for No. B Set; Weight each
about 3 lbs. \$2.00



Finest Tool Steel; In Sets Complete; One Set in a Hardwood Box.

No. C9 SET—Stock 29 inches Long; With 9 Sizes Taper Taps, Dies and Collets.

		CUTTING SIZES.									Per Set
Inches	Threads to inch	$\frac{3}{4}$	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	
20	18	16	14	12	11	10	9	8			\$23.25

Diameter of Collets $2\frac{3}{4}$ inches.

Weight per Set about 28 lbs.

Extra Stocks only for No. C9 Set; Weight each about $3\frac{1}{4}$ lbs. \$2.00
For Prices of Extra Taps and Dies, for Lightning Screw Plates, see Page 252. Lightning Taps and Dies are $\frac{1}{32}$ Over Size; V-Thread.



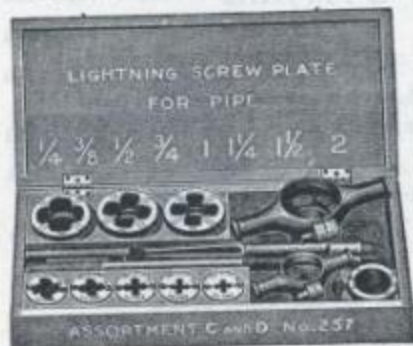
For Pipe.



Standard Thread; Finest Tool Steel; In Sets Complete; One Set in a Hardwood Case.

No. C5 SET—Stock 35 inches Long; 5 Sizes Dies, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 inch; Weight per set about 18 lbs. \$12.00

No. D3 SET—Stock 53 inches Long; 3 Sizes Dies, $\frac{1}{4}$, $1\frac{1}{2}$, 2 inches; Weight per set about 35 lbs. \$20.00



Finest Tool Steel.

For Pipe.

Standard Thread.

No. 257 SET—C5 and D3 Combined WITH 8 SIZES Dies, and Guides $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, $1\frac{1}{2}$, 2 inches. C5-Stock, 35 inches Long; No. D3-Stock, 53 inches Long; Weight per set about 45 lbs. \$32.00

Complete in a Hardwood Case.



LIGHTNING DIES AND STOCKS.

Pump Makers'.



No. 900—DOUBLE STOCK; Complete with one Die each $\frac{3}{8}$ inch, 14 Threads to inch, and $\frac{7}{16}$ inch, 12 Threads to inch; Dies $\frac{1}{32}$ Over Size; V-Thread; Stock 14 $\frac{1}{2}$ inches Long; Weight each about 2 lbs. Each \$3.00
Packed Loose.

ADJUSTABLE TAP WRENCHES.



NEW PATENT LIGHTNING.

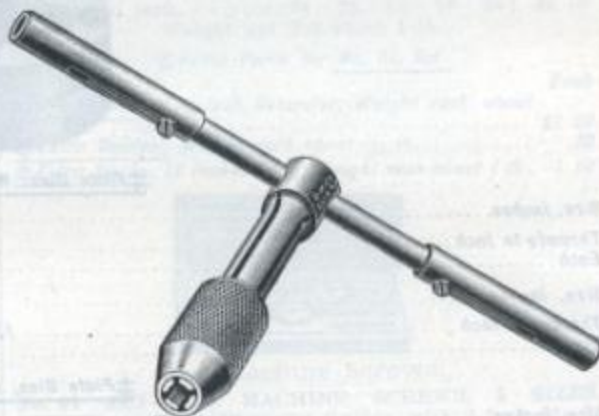
The Stocks are Drop Forged; The Jaws of Tool Steel, Closely Fitted; The Handles of Best Bicycle Tubing, Knurled. A Quick Adjustment of the Jaw is given by Turning One Handle.

Nos.	Length.	Weight each about, lbs.	For Hand Taps.	Each
951	7 in.	$\frac{1}{2}$	$\frac{1}{4}$ in. and smaller.	\$1.35
952	10 $\frac{1}{2}$ in.	1	$\frac{3}{16}$ in. to $\frac{1}{2}$ in., inclusive.	2.15
953	16 in.	2	$\frac{1}{4}$ in. to $\frac{3}{4}$ in., inclusive.	2.75
954	21 in.	3	$\frac{3}{8}$ in. to 1 in., inclusive.	3.50
955	26 in.	4	$\frac{1}{2}$ in. to 1 $\frac{1}{4}$ in., inclusive.	4.75

Packed Loose.



No. 1.



No. 3.

Made of Soft Steel, with Hardened Jaws; Polished.

Per Dozen

No. 1—Holds Taps $\frac{1}{16}$ to $\frac{1}{4}$ inch; Holds Drills $\frac{1}{16}$ to $\frac{3}{16}$ inch; Length of Handle 4 inches; Length over all 3 inches; Weight per dozen about 3 lbs. \$10.00
No. 3—Holds Taps $\frac{3}{16}$ to $\frac{1}{2}$ inch; Adjustable Handle 8 inches Long when Extended, 5 $\frac{1}{4}$ inches when Closed; Length over all 3 $\frac{1}{2}$ inches; Weight per dozen about 8 $\frac{1}{2}$ lbs. 30.00
One-twelfth Dozen in a Cardboard Box.

PLUG TAPS FOR BRASS.



Right or Left Hand, V-Thread.

Tool Steel, Polished.

Diameter, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$
Number of Threads per inch	27	27	27
Weight each about, ozs.	8	10	11
Each	\$0.45	.50	.55

Packed Loose.

LIGHTNING TAPS.

For Lightning Plates; Finest Tool Steel.



Taper Tap.



Plug Tap.



Bottoming Tap.

	Plate and Hand Taps; Taper, Plug and Bottoming.										
Size, inches	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
Threads to inch	24	20	16, 18	14, 16	12, 14, 16	12, 13, 14	12	10, 11, 12	10	9	8
Each	\$0.35	.45	.50	.55	.60	.70	.80	.90	1.20	1.60	2.00



Machine Nut Tap.

Size, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
Threads to inch	18, 20	16, 18	14, 16	12, 14, 16	12, 13, 14	12	10, 11, 12	10	9	8
Each	\$0.60	.70	.80	.90	1.00	1.15	1.30	1.60	2.10	2.80

LIGHTNING DIES FOR LIGHTNING PLATES.

Finest Tool Steel.



Plate Dies, Without Collets.

Size, inches	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$
Threads to inch	24	18, 20	16, 18	12, 14, 16	12, 14, 16
Each	\$1.00	1.00	1.00	1.15	1.30
Size, inches	$\frac{1}{2}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{3}{4}$	1
Threads to inch	12, 13, 14	12	10, 11, 12	10	9
Each	\$1.50	1.60	1.75	2.00	2.50

Plate Dies, with Collets.

Size, inches	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$
Threads to inch	24	18, 20	16, 18	12, 14, 16	12, 14, 16
Each	\$1.50	1.50	1.50	1.65	1.80
Size, inches	$\frac{1}{2}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{3}{4}$	1
Threads to inch	12, 13, 14	12	10, 11, 12	10	9
Each	\$2.00	2.10	2.25	2.50	3.00

Taps and Dies $\frac{1}{32}$ Over Size; V Thread.

Taps: Weight each, all styles, about, $\frac{1}{4}$ inch, 2 ozs.; $\frac{1}{2}$ inch, 4 ozs.; $\frac{3}{4}$ inch 8 ozs.

Dies: Weight each, about, $\frac{3}{16}$ inch, $\frac{1}{4}$ lb.; $\frac{7}{16}$ inch, $\frac{3}{8}$ lb.; 1 inch $\frac{3}{4}$ lb.

DESCRIPTION OF LIGHTNING DIES.

The Taper-Headed Screws BB, regulate the size. Two Binding Screws, not shown in cut, are placed opposite the two shown, AA.

In adjusting the Die, the Binding-Screws, AA, are first slackened, and the size required fixed by moving the Taper-Headed Screws, BB, in or out; after which the Binding Screws, AA, are set very tight, the last thing.

The Collets holding the Dies have Guides for starting Bolts true, BUT WHEN DESIRABLE TO CUT CLOSE UNDER THE HEADS OF BOLTS THE FACE SIDE OF THE DIE IS USED.



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GREEN RIVER SCREW PLATES.



Finest Tool Steel; in Sets Complete; One Set in a Hardwood Case.



No. 05 SET—5 SIZES Taper Taps, Dies and Guides, with Stock and Tap Wrench.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{8}$ $\frac{3}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$	\$5.50
Threads to inch	40 36 32 28 24	

Weight per Set about 1 lb.

Stocks 6 inches Long, Diameter of Dies, $\frac{1}{8}$ inch; for Gunsmiths, Model Makers, Amateurs, etc.; Threads Finished in once going over.

No. 07 SET—7 SIZES Taper Taps, Dies and Guides, with Stock and Tap Wrench.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{8}$ $\frac{3}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{7}{8}$ $1\frac{1}{2}$	\$7.00
Threads to inch	44 40 36 32 28 24	

Weight per Set about 1 1/2 lbs.

Gunsmiths, Model Makers, Amateurs, etc.; Threads Finished in once going over.



No. 014 SET—14 SIZES Taper Taps, Dies and Guides, with 6 inch Stock, Tap Wrench, fitting in Stock, Bit Brace, Die Holder, and Die Holder for Lathe Use.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{8}$ $\frac{3}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{7}{8}$ $1\frac{1}{2}$ $1\frac{3}{4}$	\$15.00
Threads to inch	60 48 44 40 36 32 28 24	
Inches	$\frac{1}{8}$ $\frac{3}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{7}{8}$ $1\frac{1}{2}$ $1\frac{3}{4}$	\$15.00
Threads to inch	32 32 28 28 24 20 20	

Weight per Set about 4 lbs.

✦ Extra Parts for Nos. 05, 07 and 014 Sets.

	Each
✦ Stocks Only, 6 inch; Weight each about $\frac{1}{4}$ lb.	\$0.75
✦ Dies (See List of Sizes Below); Weight each about 2 ozs.	.60
✦ Guides; Weight each about 2 ozs.	.15
✦ Taps (See List of Sizes Below); Weight each about 1 oz.	.40

Taps and Dies in Stock to Fit Nos. 05, 07 and 014 Sets.

Size, inches	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Threads to inch	60	48	44	40	36	32	28	24
Size, inches	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Threads to inch	32	32	28	28	24	20	20	20

Nos. AL, 01 and 02 Sets are furnished $\frac{1}{2}$ over Size, V Thread; All other Sets on this Page are exact Size, V Thread.

No. AL SET—5 SIZES Taps, Dies and Guides, with 10 inch Stock.

CUTTING SIZES.		Per Set
Inches	$\frac{1}{8}$ $\frac{3}{16}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$	\$8.00
Threads to inch	24 20 18 16 14	

Weight per Set about 1 lb.

✦ Extra Parts for No. AL Set.

	Each
✦ Extra Dies, $1\frac{1}{2}$ inch Diameter; Weight each about $\frac{1}{2}$ lb.	\$1.00
✦ Extra Guides; Weight each about $\frac{1}{2}$ lb.	.20
✦ Extra Stocks, 10 inches Long; Weight each about 1 lb.	1.50



For Machine Screws.

No. 01 SET—FOR MACHINE SCREWS, 5 SIZES Taper Taps, Dies and Guides, with 6 inch Stock and Tap Wrench, Fitting in Stock; Diameter of Dies $\frac{1}{8}$ inch.

CUTTING SIZES.		Per Set
Screw Gauge	4 6 8 10 12	\$5.50
Threads to inch	36 32 24 24 24	

Weight per Set about 1 lb.

No. 02 SET—FOR MACHINE SCREWS; 7 SIZES; Taper Taps, Dies and Guides, with 6 inch Stock and Tap Wrench (Fitting in Stock); Diameter of Dies, $\frac{1}{8}$ inch.

CUTTING SIZES.		Per Set
Screw Gauge	4 6 8 10 12 14 16	\$7.00
Threads to inch	36 32 24 24 24 24 24	

Weight per Set about $\frac{1}{2}$ lb.

✦ Extra Parts for Nos. 01 and 02 Sets.

	Each
✦ Extra Stocks; Weight each about $\frac{1}{4}$ lb.	\$0.75
✦ Extra Dies; Weight each $\frac{1}{4}$ lb.	.60
✦ Extra Guides; Weight each about 2 ozs.	.15
✦ Extra Taps; Weight each about 1 oz.	.40

GREEN RIVER SCREW PLATES.

Finest Tool Steel; in Sets Complete; One Set in a Hardwood Case.



No. 1 SET—Stock 10 inches Long; WITH 5 SIZES Taper Taps, Dies and Guides, and Bit-Brace Holder for Dies.

Dies.		CUTTING SIZES.					Per Set
Inches		$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	} \$8.75
Threads to inch.....		24	20	18	16	14	
(Diameter of Dies, $\frac{1}{16}$ inch.)							
Weight of Set about 6 lbs.							

±Extra Stocks only for No. 1 Set; Weight each about 1 lb.		Each
$\frac{1}{4}$ lb		\$1.50
±Extra Dies only, for No. 1 Set; Weight each about		
$\frac{1}{4}$ lb		1.00
±Extra Guides only, for No. 1 Set; Weight each about		
$\frac{1}{4}$ lb .....		.20

For Extra Taps see Page 386.



No. 2 SET—Stock 23 inches Long; WITH 7 SIZES Taper Taps, Dies and Guides.

CUTTING SIZES.								Per Set
Inches	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	} \$14.25	
Threads to inch..	20	18	16	14	12	11 10		
(Diameter of Dies, $\frac{3}{16}$ inches.)								
Weight per Set about 19 lbs.								

±Extra Stocks only for No. 2 Set; Weight each about 3 lbs		Each
$\frac{3}{4}$ lbs		\$2.00



No. 4 SET—Stock 29 inches Long; WITH 7 SIZES Taper Taps, Dies and Guides.

CUTTING SIZES.								Per Set
Inch	$\frac{3}{16}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	} \$20.00
Threads to inch.	16	14	12	11	10	9	8	
(Diameter of Dies, $\frac{3}{16}$ inches.)								
Weight per Set about 23 lbs.								

±Extra Stocks only for No. 4 Set; Weight each about		Each
$3\frac{1}{2}$ lbs		\$2.00



No. 1 1/2 SET—Stock 22 inches Long; WITH 7 SIZES Taper Taps, Dies and Guides.

CUTTING SIZES.								Per Set
Inches	$\frac{1}{16}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	} \$13.00
Threads to inch..	20	18	16	14	12	11	10	
(Diameter of Dies, $\frac{2}{16}$ inches.)								
Weight per Set about 15 lbs.								

±Extra Stocks only for No. 1 1/2 Set; Weight each about		Each
$1\frac{1}{2}$ lbs		\$2.00



No. 3 SET—Stock 29 inches Long; WITH 5 SIZES Taper Taps, Dies and Guides.

CUTTING SIZES.						Per Set
Inches.....	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	1	} \$15.75
Threads to inch.	12	11	10	9	8	
(Diameter of Dies, $\frac{2}{16}$ inches.)						
Weight per Set about 20 lbs.						

±Extra Stocks only for No. 3 Set; Weight each about		Each
$3\frac{1}{2}$ lbs		\$2.00



No. 5 SET—Stock 29 inches Long; WITH 9 SIZES Taper Taps, Dies and Guides.

CUTTING SIZES.							Per Set
Inches	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$1\frac{1}{2}$	} \$23.00
Threads to inch.....	20	18	16	14	12	11	
Inches	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$1\frac{1}{2}$	
Threads to inch.....	20	18	16	14	12	11	
(Diameter of Dies, $\frac{1}{16}$ inches.)							
Weight per Set about 27 lbs.							

±Extra Stocks only for No. 5 Set; Weight each about		Each
$3\frac{1}{2}$ lbs		\$2.00

Extra Taps and Dies, for Sets Nos. 1 1/2, 2, 3, 4 and 5, for Prices see Page 386.
All Sets $\frac{1}{16}$ inch over size, V Thread.

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GREEN RIVER SCREW PLATES.

Finest Tool Steel; in Sets Complete; One Set in a Hardwood Case.

**No. 6 SET**—Stock 35 inches Long; WITH 7 SIZES Taper Taps, Dies and Guides.

		CUTTING SIZES.							Per Set
Inches	Threads to inch.	1/2	3/8	1/2	3/4	1	1 1/4	1 1/2	
12	11	10	9	8	8	7			\$26.00

(Diameter of Dies, 2 3/4 inches.)

Weight per Set about 29 lbs.

Each

±Extra Stocks only for No. 6 Set; Weight each about

4 1/2 lbs. \$4.00

**No. 8 SET**—Stock 35 inches Long; WITH 11 SIZES Taper Taps, Dies and Guides.

		CUTTING SIZES.							Per Set
Inches	Threads to inch.	1/4	5/16	3/8	7/16	1/2	5/8		
20	18	16	14	12	11				\$34.00

Inches 10 9 8 8 7

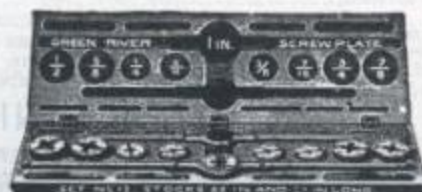
(Diameter of Dies, 3 3/4 inches.)

Weight per Set about 33 lbs.

Each

±Extra Stocks only, for No. 8 Set, Weight each about

4 1/2 lbs. \$4.00

**No. 13 SET**—1 Stock each 22 and 29 inches Long; WITH 9 SIZES Taper Taps, Dies and Guides.

		CUTTING SIZES.					Per Set
Inches	Threads to inch.	1/4	5/16	3/8	7/16		
20	18	16	14				\$25.00

Inches 12 11 10 9 8

(Diameter of Dies, 1/2 inch and under 2 3/4 inch; 5/8 inch and over 2 3/4 inch.)

Weight per Set about 28 lbs.

Each

±Extra Stocks only, 22 inches, for No. 13 Set, Weight

each about 2 1/2 lbs. \$2.00

±Extra Stocks only, 29 inches, for No. 13 Set, Weight

each about 3 1/2 lbs. 2.00

For Prices of Extra Taps, Dies and Guides, see Page 386.

All Sets 1/32 inch over Size, V Thread.

***GREEN RIVER DIES.**

Showing Die ready for Clamping to the Elastic Stock.

Finest Tool Steel.

The Cup-Headed Screws on the right holds the halves firmly together, acting as a hinge. The size is regulated by the wedge-shaped (taper head) Screw on the left, the whole being clamped in the Elastic Stock.



Showing Mechanism of Die and Guide.

DIES, WITHOUT GUIDES, for all Green River Plates, except Nos. 1 and 1 1/2.

Size, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4
Threads to inch	20	18	16	14	12	11	10	9	8	8	7
Each	\$1.25	1.25	1.50	1.50	1.50	1.75	2.00	2.50	3.00	3.50	4.00

Average Weight each about 1 lb.

IN ORDERING DIES, SPECIFY the Number of Screw Plate they are wanted for.

GREEN RIVER TAPS.

Size, inches	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8
Threads to inch	24	20	18	16	14	12	12	11	10
Each	\$0.35	.45	.50	.55	.60	.70	.80	.90	1.20

Average Weight each about 1/2 lb.

One in a Cardboard Box.

Green River Dies and Taps are 1/32 inch Over Size, V Thread, for Rough Iron.

MACHINISTS' HAND TAPS.

Finest Tool Steel.

**Plug.****Taper.****Bottoming.**

	V Shape Thread, Exact Sizes.					Taper Plug or Bottoming.			
Size, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Length over all, inches	2 1/2	2 3/8	2 1/2	2 3/8	3 1/2	3 1/2	3 1/2	3 1/2	4 1/2
Threads to inch	16, 18, 20	16, 18	14, 16, 18	14, 16	12, 13, 14	12, 14	10, 11, 12	11, 12	11, 12
Each	\$0.45	.50	.55	.60	.70	.80	.90	1.05	1.05
Per Set of 3	1.35	1.50	1.65	1.80	2.10	2.40	2.70	3.15	3.15
Size, inches	3/4	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3
Length over all, inches	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	5 1/2
Threads to inch	10, 12	10	9, 10	8	8	8	8	8	8
Each	\$1.20	1.40	1.60	2.00	2.00	2.00	2.00	2.00	2.00
Per Set of 3	3.60	4.20	4.80	6.00	6.00	6.00	6.00	6.00	6.00

1 each Taper Plug and Bottoming Taps to a Set of (3.)

For Taps 1/2 Over Size, see Lightning Taps and Dies, Page 382.)

**Machine Screw.**

Screw or Wire Gauge, Nos.	4	6	8	10	12	14
Threads to inch	32, 36, 40	30, 32	24, 30, 32	24, 30, 32	20, 24	20, 24
Diameter, inches	1/16	3/32	1/8	5/16	3/8	1/2
Each	\$0.35	.35	.35	.35	.35	.35
Screw or Wire Gauge, Nos.	16	18	20	22	24	26
Threads to inch	16, 18, 20	16, 18	16, 18	16, 18	16, 18	16, 18
Diameter, inches	17/64	9/32	5/16	3/8	1/2	5/8
Each	\$0.38	.38	.45	.45	.45	.45

**Stove Bolt.**

Size, inches	3/16	1/4	5/16	3/8
Threads to inch	24	18	18	18
Each	\$0.35	.38	.38	.45

Weight, all Styles, about, 1/4 inch, 2 ozs; 1/2 inch, 4 ozs; 3/4 inch, 8 ozs.

Packed Loose.

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LIGHTNING DIE HOLDERS.

Dies and Taps, for Bit-Brace Use.
PUMP MAKERS'.



No. A—LIGHTNING DIE HOLDER; Polished
Cast Steel; Holds all Sizes of No. AD Dies;
Length over all $5\frac{1}{2}$ inches..... \$0.75
Weight Each about $\frac{3}{4}$ lb.

Each

No. AD—DIES, with Guides; Tool Steel; For No. A
Die Holders; Outside Diameter $1\frac{5}{16}$ inches.
Size, inches $\frac{3}{16}$ $\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$
Threads to inch 24 20 18 16 14
Each \$1.20 1.20 1.20 1.20 1.20
Weight Each about $\frac{1}{4}$ lb.

One in a Cardboard Box.



Holder and Die.

MACHINISTS'.



Tap.

*DIE HOLDERS ONLY.

Each

No. BH—LIGHTNING DIE HOLDER; Polished Cast
Steel; For No. B Set; Length $5\frac{1}{2}$ inches;
Weight each about 1 lb..... \$0.65
One in a Cardboard Box.

EXTRA TAPS.

No. ABT—EXTRA TAPS, for No. A Holders and No. B
Set; Tool Steel; Length of Thread $1\frac{3}{4}$ inches;
Length over all $4\frac{3}{4}$ inches.
Size, inches $\frac{3}{16}$ $\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$
Threads to inch 24 20 18 16 14
Each \$0.50 .50 .55 .60 .70
Weight Each about 2 ozs.
Packed Loose.

No. B Set—LIGHTNING TAPS, DIES AND DIE HOLDERS
complete; Polished Cast Steel Die Holder; Tool Steel
Dies and Taps; Length of Holder $5\frac{1}{2}$ inches; Length of
Tap $4\frac{1}{4}$ inches.

Size, inches $\frac{3}{16}$ $\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{7}{16}$
Threads to inch 24 20 18 16 14
Per Set \$1.90 1.90 1.95 2.25 2.35

One Set in a Cardboard Box; Weight per Set about $1\frac{1}{4}$ lbs.

REAMERS.



LIGHTNING TAPER.

Finest Tool Steel.

*No. 470— $1\frac{1}{2}$ in. Round Shank.

Inches.....	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{4}$
Length over all, inches.....	$5\frac{1}{4}$	$5\frac{3}{4}$	$5\frac{1}{2}$	6	$6\frac{1}{4}$	$6\frac{1}{2}$	$6\frac{3}{4}$	7	$7\frac{1}{4}$	$7\frac{1}{2}$	$7\frac{3}{4}$	8	8
Length of Flute, inches.....	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{4}$	3	$3\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$	4	$4\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	5	5
Each.....	\$0.55	.60	.65	.70	.75	.85	1.00	1.20	1.40	1.60	1.80	1.80	1.80

Weight Each about, $\frac{1}{4}$ inch, 4 ozs.; $\frac{1}{2}$ inch, 6 ozs.; $\frac{3}{4}$ inch, 8 ozs.; $1\frac{1}{8}$ inch 1 lb.
Packed Loose.



No. 460.



No. 461.

No. 460—LIGHTNING TAPER; Square Shank for Bit Brace Use.

Sizes.....	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{4}$
Length over all, in., 5	$5\frac{1}{8}$	$5\frac{1}{4}$	$5\frac{1}{2}$	$5\frac{3}{4}$	$6\frac{1}{8}$	$6\frac{1}{4}$	$6\frac{1}{2}$	$6\frac{3}{4}$	7	$7\frac{1}{8}$	$7\frac{1}{4}$	$7\frac{1}{2}$	8
Length of Flute, in., $2\frac{1}{8}$	$2\frac{1}{16}$	$2\frac{1}{8}$	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{3}{4}$	$2\frac{1}{2}$	3	$3\frac{1}{8}$	$3\frac{1}{4}$	$3\frac{1}{2}$	4
Each.....	\$0.45	.50	.55	.60	.70	.80	.90	1.05	1.20	1.40	1.60	1.80	2.60

Weight Each about, $\frac{1}{4}$ inch, 2 ozs.; $\frac{3}{8}$ inch, 8 ozs.; $1\frac{1}{8}$ inch, $1\frac{1}{2}$ lbs. Per Set

No. 463 SET—Lightning Taper Reamers, 9 SIZES IN HARDWOOD CASE; Sizes, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$ inch.....
\$7.25

Weight per Set about 4 lbs.

*No. 400—GREEN RIVER; Solid Spiral Fluted Reamers.

Sizes.....	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{4}$
Length over all, inches.....	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	$5\frac{1}{2}$	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	$9\frac{1}{2}$
Length of Flute, inches.....	$1\frac{1}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{4}$	3	$3\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$	4	$4\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$
Each.....	\$1.40	1.50	1.60	1.75	1.90	2.00	2.20	2.40	2.60	2.80	3.10	3.40	3.70

Size..... $\frac{15}{16}$ 1 $1\frac{1}{16}$ $1\frac{1}{8}$ $1\frac{1}{4}$ $1\frac{1}{2}$ $1\frac{3}{4}$ $1\frac{7}{8}$ 2 $2\frac{1}{8}$ $2\frac{1}{4}$ $2\frac{1}{2}$ $2\frac{3}{4}$

Length over all, inches..... 9 $9\frac{1}{2}$ 10 $10\frac{1}{2}$ 11 $11\frac{1}{2}$ 12 $12\frac{1}{2}$ 13 $13\frac{1}{2}$

Length of Flute, inches..... $4\frac{1}{2}$ $4\frac{3}{4}$ 5 $5\frac{1}{4}$ $5\frac{1}{2}$ $5\frac{3}{4}$ 6 $6\frac{1}{4}$ $6\frac{1}{2}$ $6\frac{3}{4}$ $6\frac{1}{2}$ $6\frac{1}{2}$ $6\frac{1}{2}$

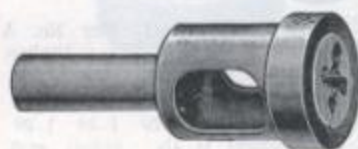
Each..... \$3.40 3.70 4.00 4.30 4.60 4.90 5.20 5.60 6.00 6.40

Weight Each about, $\frac{1}{4}$ inch, 2 ozs.; $\frac{1}{2}$ inch, 6 ozs.; $\frac{3}{4}$ inch, 1 lb.; $1\frac{1}{8}$ inch, $1\frac{1}{2}$ lbs.; $1\frac{1}{4}$ inch, 3 lbs.; $1\frac{1}{2}$ inch, 5 lbs.

Packed Loose.



LATHE DIE HOLDERS.



Nos.	Tool Steel, Polished. Holds Dies, inches.	Size of Shank, inches.	Weight Each about, ozs.	Each
S01	$\frac{5}{8}$	$\frac{1}{2}$	2	\$0.50
S01 $\frac{1}{4}$	$\frac{13}{16}$	$\frac{1}{2}$, $\frac{9}{16}$, $\frac{11}{16}$	4	.50
S02	1	$\frac{1}{2}$, $\frac{9}{16}$, $\frac{11}{16}$	8	.75
S03	$1\frac{5}{16}$	$\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$	16	1.50
S04	$1\frac{9}{16}$	$\frac{3}{4}$, $\frac{13}{16}$, 1	24	2.75
S05	$2\frac{1}{4}$	$1\frac{1}{16}$, $1\frac{1}{8}$, $1\frac{1}{4}$	55	4.00

NOTE.—In Ordering these Holders, state SIZE OF SHANK desired.
PRICES ARE FOR HOLDERS ONLY.

Packed Loose.

HART'S DUPLEX DIE STOCKS.



For Threading Pipe.

Japanned Cast Steel Body; Nickel-Plated Cast Steel Adjusting Rims, with Handles; Polished Steel Detachable Arms, Tempered Tool Steel Dies; Standard Threads.

	Wgt. each about, lbs.	Without Cut-Off.	With Cut-Off.
No. 1 —LENGTH 23 INCHES; With Dies for Threading $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$ inch Pipe...	9	Each \$13.00	Each \$16.00
No. 2 —LENGTH 38 INCHES; With Dies for Threading $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$ inch Pipe.....	20	17.00	20.00
No. 3 —LENGTH 45 INCHES; With Dies for Threading 1, $1\frac{1}{4}$, $1\frac{1}{2}$, 2 inch Pipe.....	25	22.00	25.00
No. 3 $\frac{1}{2}$ —LENGTH 45 INCHES; With Dies for Threading $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$, 2 inch Pipe.....	25	25.00	28.00
No. 4 —LENGTH 60 INCHES; With Dies for Threading $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3 inch Pipe.....	40	40.00	45.00
No. 5 —LENGTH 60 INCHES; With Dies for Threading $2\frac{1}{2}$, 3, $3\frac{1}{2}$, 4 inch Pipe.....	55	55.00	60.00

No Wrench, Thumb Screw or Collets; Tool complete in itself; Dies easily sharpened on a Grindstone.
One in a Wood Box.

Nos. 1 to 3 $\frac{1}{2}$, inclusive, with Two Handles; Nos. 4 and 5 with 4 Handles.

EXTRA DIES FOR HART'S DUPLEX DIE STOCKS.

	Tempered Tool Steel.	Complete Set
No. 1 —COMPLETE SET, Composed of 3 Single Sets of 4 Pieces each, i. e., 1 Set each ($\frac{1}{8}$), ($\frac{1}{4}$, $\frac{3}{8}$) and ($\frac{1}{2}$, $\frac{5}{8}$); Weight each about $1\frac{1}{2}$ lbs.....		\$4.50
No. 2 —COMPLETE SET, Composed of 3 Single Sets of 4 Pieces each, i. e., 1 Set each ($\frac{3}{4}$, $\frac{1}{2}$), ($\frac{3}{4}$, $\frac{1}{2}$) and (1, $1\frac{1}{4}$); Weight each about $2\frac{1}{2}$ lbs.....		5.25
No. 3 —COMPLETE SET, Composed of 2 Single Sets of 4 Pieces each, i. e., 1 Set each (1, $1\frac{1}{4}$) and ($1\frac{1}{2}$, 2); Weight each about 2 lbs.....		4.00
No. 3 $\frac{1}{2}$ —COMPLETE SET, Composed of 3 Single Sets of 4 Pieces each, i. e., 1 Set each ($\frac{1}{2}$, $\frac{3}{4}$), (1, $1\frac{1}{4}$) and ($1\frac{1}{2}$, 2); Weight each about 3 lbs.....		6.00
No. 4 —COMPLETE SET, Composed of 2 Single Sets of 4 Pieces each, i. e., 1 Set each ($1\frac{1}{2}$, 2) and ($2\frac{1}{2}$, 3); Weight each about $3\frac{1}{2}$ lbs.....		7.00
No. 5 —COMPLETE SET, Composed of 2 Single Sets of 4 Pieces each, i. e., 1 Set each ($2\frac{1}{2}$, 3) and ($3\frac{1}{2}$, 4); Weight each about $4\frac{1}{2}$ lbs.....		8.00

In Ordering always specify whether Right or Left Hand Dies are wanted.
One Set in a Wood Box.

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STANDARD PIPE STOCKS AND DIES.



Japanned Malleable Iron Body, with Nickel Plated Top Plate; Plain Steel Tubular Nickel Plated Detachable Arms; Finest Tool Steel Dies, Standard Threads.

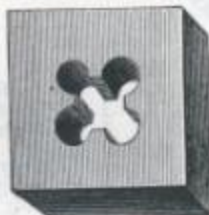
	0	1	1½	1¾	2
Nos.	30	36	43	43	51
Length, inches	¾ to 1	¾ to 1	¾ to 1¼	1 to 1½	1¼ to 2
Fitted with Dies to Cut Pipe, inches.	8	14	17	17	27
Weight each about, lbs.	\$9.50	15.00	13.50	13.50	20.00
Complete, each					

One in a Wood Box.

STANDARD SOLID PIPE DIES.

FOR STANDARD PIPE STOCKS.
Finest Tool Steel.

In Ordering, always specify whether
Right or Left Hand Dies
are wanted.



Right Hand.

Each

Each

Dies for No. 0 Stocks: Size, inches, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$; 2 inches Square	\$1.50
Dies for No. 1 Stocks: Size, inches, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$; 2½ inches Square	2.00
Dies for No. 1½ Stocks: Size, inches, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$; 3 inches Square	2.50

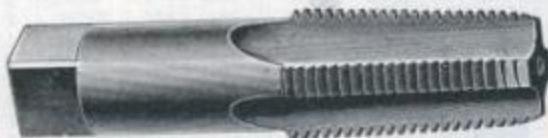
Dies for No. 1¾ Stocks: Size, inches, $\frac{1}{2}$, $\frac{3}{4}$, 1 , $1\frac{1}{4}$, $1\frac{1}{2}$; 3 inches Square	\$2.50
Dies for No. 2 Stocks: Size, inches, $\frac{3}{4}$, 1 , $1\frac{1}{4}$, $1\frac{1}{2}$, 2 ; 4 inches Square	3.50

Left Hand, for Standard Stocks, same sizes and lists as Right Hand.

Weight each about, ¼ inch ½ lb.; ½ inch 1 lb.; ¾ inch 1½ lbs.; 1 inch 2 lbs.
Packed Loose.

PIPE TAPS.

Finest Tool Steel.



With Either Right or Left Hand Standard Threads.

Diameter, inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
Each	\$1.12	1.25	1.50	1.87	2.50
Diameter, inches	1	1¼	1½	2	2½
Each	\$3.12	3.75	4.62	6.25	10.50

PIPE REAMERS.



Diameter, inches	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
Each	\$1.12	1.25	1.50	1.87	2.50
Diameter, inches	1	1¼	1½	2	2½
Each	\$3.12	3.75	4.62	6.25	10.50

ALWAYS SPECIFY WHETHER RIGHT HAND OR LEFT HAND TAPS ARE WANTED.
Taps and Reamers; Weight each about, ½ inch ½ lb.; 1½ inch 2½ lbs.; 2 inch 4 lbs.
Packed Loose.

WIRE GAUGES.

Turned from High Grade Tool Steel, Tempered and Tested.



AMERICAN.

No. 732—ROUND, POCKET SIZE; Diameter $2\frac{1}{4}$ inches; Oil Finish; Gauge Numbers, Size, 5 to 36, on One Side and Decimal Equivalents on Reverse Side; Weight each about 1 oz.... **\$2.00**

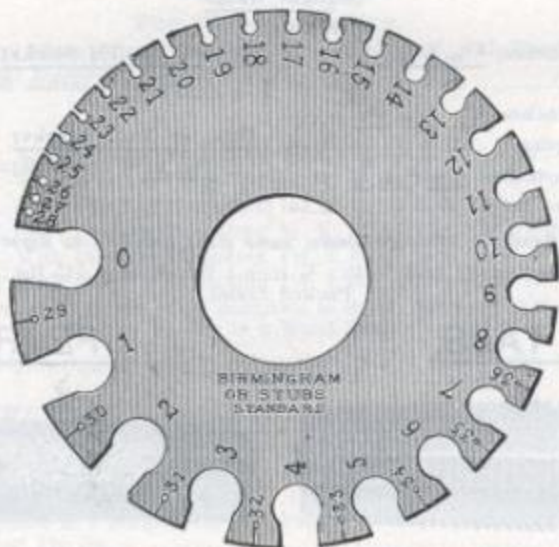
For Sheet Brass and Sheet German Silver.



ENGLISH.

No. 8—ROUND, POCKET SIZE; Diameter $2\frac{3}{4}$ inches; Polished; Gauge Numbers, Size 0 to 36, on One Side; Weight each about 2 oz.... **\$2.50**

For Iron, Steel and Brass Wire, except Music Wire; All Sheet Metals, except Brass and German Silver; Also used for Machine Screws.



STUBS'

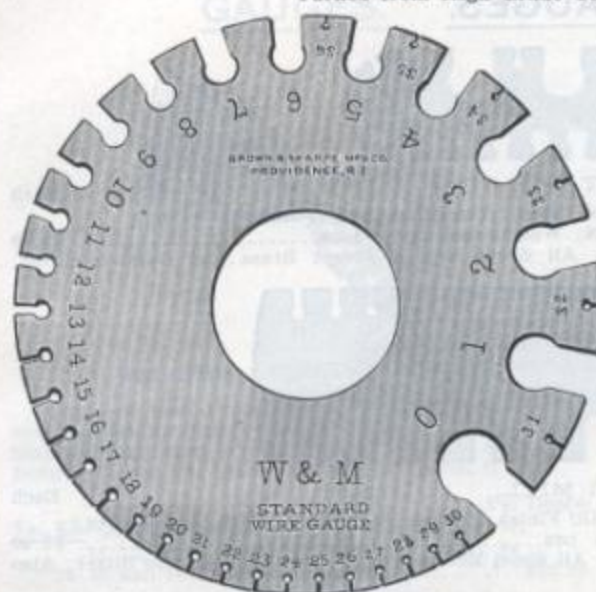
No. 10—ROUND, LARGE SIZE; Diameter 3 inches; Polished; Gauge Numbers, Size 0 to 36, on One Side; Weight each about 2 ozs.... **\$3.00**

For Iron, Steel and Brass Wire, except Music Wire; All Sheet Metals except Brass and German Silver; Also used for Machine Screws.

Cuts Full Size.

WIRE GAUGES.

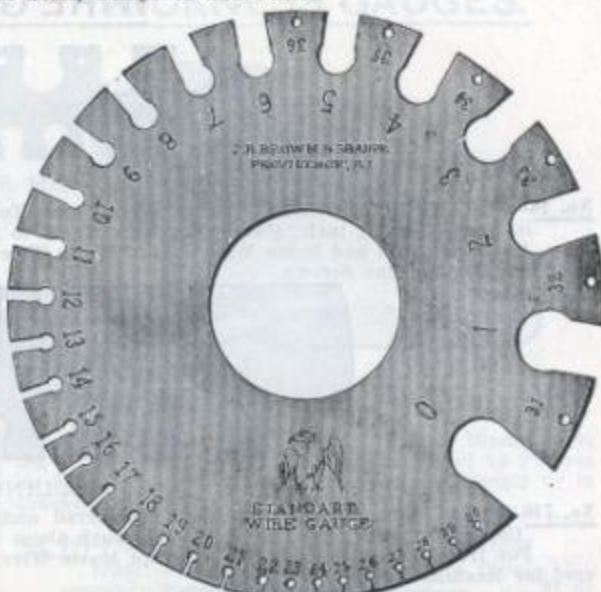
Turned from High Grade Tool Steel, Tempered and Tested.



WASHBURN AND MOEN, STANDARD.

No. 737—ROUND, LARGE SIZE; Diameter $3\frac{1}{4}$ inches; Oil Finish; Gauge Numbers, Size 0 to 36, on One Side; Weight each about 4 ozs.. \$2.50

Sometimes known as the A. S. & W. Co., and is the one by which all Steel and Iron Wire is drawn by the American Steel and Wire Company.



AMERICAN.

No. 790—ROUND, LARGE SIZE; Diameter $3\frac{1}{4}$ inches; Oil Finish; Gauge Numbers, Size 0 to 36, on One Side; Weight each about 4 ozs.. \$2.50

For Sheet Brass and Sheet German Silver.
Six in a Cardboard Box.

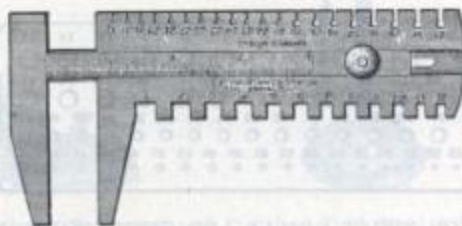
DIFFERENT STANDARDS FOR WIRE GAUGES IN USE IN THE UNITED STATES.

Dimensions of Sizes in Decimal Parts of an Inch.

No. of Wire Gauge.	American or Brown & Sharpe's.	Birmingham or Stubbs'.	Dialton's and Old English from Brass Mfr's List.	No. of Wire Gauge.	American or Brown & Sharpe's.	Birmingham or Stubbs'.	Dialton's and Old English from Brass Mfr's List.
0000	.46	.454	.454	19	.03539	.042	.04
000	.40964	.425	.425	20	.031961	.035	.035
00	.3648	.38	.380	21	.028462	.032	.0315
0	.32495	.34	.340	22	.025347	.028	.0295
1	.2893	.3	.300	23	.022571	.025	.027
2	.25763	.284	.284	24	.0201	.022	.025
3	.22942	.259	.259	25	.0179	.02	.023
4	.20431	.238	.238	26	.01594	.018	.0205
5	.18194	.22	.220	27	.014195	.016	.01875
6	.16202	.203	.203	28	.012641	.014	.0165
7	.14428	.18	.180	29	.011257	.013	.0155
8	.12849	.165	.165	30	.010025	.012	.01375
9	.11443	.148	.148	31	.008928	.01	.01225
10	.10189	.134	.134	32	.00795	.009	.01125
11	.090742	.12	.120	33	.00708	.008	.01025
12	.080808	.109	.109	34	.006304	.007	.0095
13	.071961	.095	.095	35	.005614	.005	.009
14	.064084	.083	.083	36	.005	.004	.0075
15	.057068	.072	.072	37	.004453		.0065
16	.05082	.063	.063	38	.003965		.00575
17	.045257	.058	.058	39	.003531		.005
18	.040303	.049	.049	40	.003144		.0045

Cuts Full Size.

WIRE GAUGES AND CALIPERS.



For Iron, Steel and Brass Wire, except Music Wire; All Sheet Metals, except Brass and German Silver; Also used for Machine Screws.

No. 728—Milled from Finest Tool Steel, Tempered and Polished; Steel Caliper Clamp; Length of Caliper Jaws $3\frac{1}{4}$ inches; Length over all, Closed, $5\frac{1}{4}$ inches; Width $1\frac{1}{4}$ inches; Weight each about 8 ozs.. \$7.00

Six in a Cardboard Box.

WIRE GAUGES.



ENGLISH STANDARD.

Each

- No. 16**—POCKET SIZE, OBLONG; Milled from Finest Tool Steel, Tempered and Polished; Length 3 3/4 inches; Width 1/2 inch, Gauge Numbers, Size 1 to 26; Weight each about 1 oz. \$2.50
For Iron, Steel and Brass Wire, except Music Wire; All Sheet Metals, except Brass and German Silver; Also used for Machine Screws.



ROLLING MILL.

Each

- No. 746**—Milled from Finest Tool Steel, Tempered and Oil Finish; Length 5 1/4 inches; Width 1 7/16 inches; Gauge Numbers, Size 1 to 32; Weight each about 6 ozs. \$3.00
For Iron, Steel and Brass Wire, except Music Wire; All Sheet Metals, except Brass and German Silver; Also used for Machine Screws.

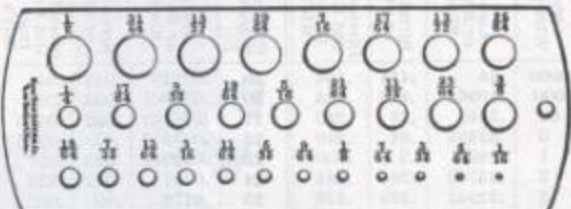
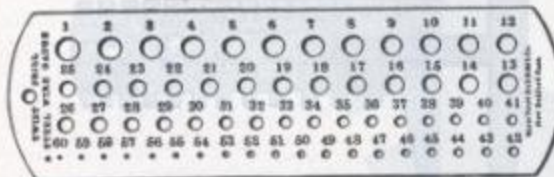
Cuts
Show
Both
Sides.

SCREW AND WIRE GAUGES.

Each

- No. 760**—POCKET; Stamped from Sheet Steel, Full Polished; Graduated in Old Standard Wire Gauge and New Standard Wire Gauge on One Side; Standard Screw Gauge and Inches and 32ds on Reverse Side; Length 4 inches; Width 1 1/2 inches; Weight each about 1 oz. \$2.50
No. 760 is a Combination Gauge, including Old and New Standard, also Wood Screw Gauge and Inch Graduation; The Old Standard is used for same purpose as Nos. 8, 9, 10, 746 and 16; New Standard for same use as Nos. 732 and 730.
Cuts are Half Size.

DRILL GAUGES.



- FOR TWIST DRILLS AND STEEL WIRE. Each
No. 127—MORSE; OBLONG; Milled from Finest Tool Steel; Full Polished; Length 5 1/4 inches; Width 1 1/2 inches; Gauge Numbers, Sizes 1 to 60; Weight each about 4 ozs. \$1.50

- FOR JOBBERS' DRILLS. Each
No. 127A—MORSE; OBLONG; Milled from Finest Tool Steel, Full Polished; Length 6 1/4 inches; Width 2 1/2 inches; Gauge Sizes, 1/16 inch to 1/2 inch; Weight each about 4 ozs. \$2.25



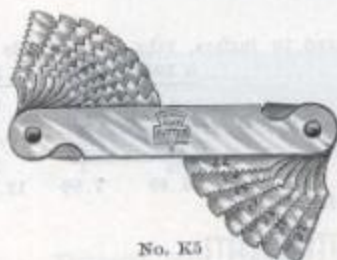
FOR TWIST DRILLS AND STEEL WIRE.

Each

- No. 127B**—MORSE; OBLONG; Milled from Finest Tool Steel, Full Polished; Length 3 inches; Width 1 1/2 inches; Gauge Numbers, Sizes 61 to 80; Weight each about 2 1/2 ozs. \$2.00
Packed Loose.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

GAUGES.



No. K5

KEEN KUTTER®; SCREW PITCH.

Stamped Steel, Polished and Tested; V-Thread; Narrow Leaves for Inside and Outside work; Each Leaf Stamped, showing Pitch; Length, Open, 4 inches; Length, Closed, 2½ inches; Length of Leaves ¾ inch.

Per Dozen

No. K5—22 PITCHES, viz.: 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38 and 40 Threads to the inch.....\$12.00

No. K7—24 PITCHES, viz.: 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28 and 30 Threads to the inch.....\$15.00

One-twelfth Dozen in a Cardboard Box;
Weight per Dozen about 1 lb.

THICKNESS GAUGES.



STEEL, NATURAL FINISH.

These Gauges consist of a Set of Steel Blades varying in Thickness, which is Plainly Indicated by Figures on Each Blade. The Blades may be used Singly or in Combination.

Each

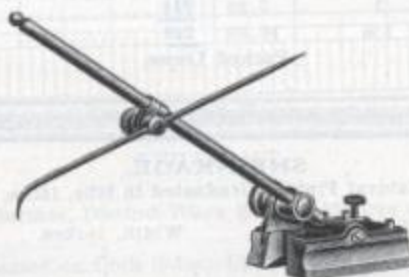
No. 781—With 22 Blades, varying in Thickness from .004 to .025 of an inch, by thousandths; Weight each about 1 ounce.....\$1.50

No. 782—With 9 Blades, .0015, .002, .003, .004, .006, .008, .010, .012 and .015 of an inch in Thickness; Weight each about ½ ounce.....1.25

Packed Loose.

SURFACE GAUGES.

Starrett's; Shaped Groove in the End and Bottom adapting it for use on Cylindrical Work.



Cast Steel Base; Case Hardened, Polished and Trued Bottom; Tempered and Polished Tool Steel Arms, Set Screws, Scribes and Base.

STARRETT'S.

Each

No. 56—SMALL SIZE; adapted for light work; Complete with Auxiliary Guide; Base 2½ inches Long, 1½ inches Wide; Length of Spindle 4 inches; Length of Scriber 3½ inches; Weight each about 12 ozs.\$3.00

STARRETT'S.

Each

No. 57—LARGE SIZE; Base 3½ inches Long, 3½ inches Wide; Length of Spindle 11½ inches; Length of Scriber 9½ inches; Weight each about 4 lbs. ...\$3.00

BILLINGS'.

Each

No. B—MEDIUM SIZE; Diameter of Base 2½ inches; Length of Spindle 7½ inches; Length of Scriber 7 inches; Weight each about 1 lb.\$2.75

One in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

STEEL RULES.

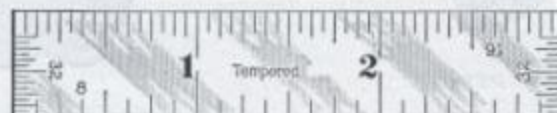


KEEN KUTTER*

Highest Grade Crucible Steel, Polished and Tempered; Graduated in inches, 8ths, 16ths, 32ds and 64ths.

Nos.	K 304	K 306	K 309	K 312
Length, inches	4	6	9	12
Width, inches	$\frac{5}{8}$	$\frac{3}{4}$	1	1
Thickness, inches	$\frac{1}{20}$	$\frac{1}{20}$	$\frac{1}{16}$	$\frac{1}{16}$
Weight per dozen about, lbs.	$\frac{1}{2}$	1	2	$2\frac{1}{2}$
Per dozen	\$5.40	7.80	12.00	15.00

One-half Dozen in a Cardboard Box.



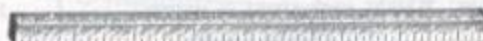
TOOL STEEL, TEMPERED AND POLISHED.

Graduated in 8ths and 16ths on One Side and 32ds and 64ths on the other; Figured so as to assist the user to quickly read the 64ths; Approximately $\frac{3}{64}$ inch Thick.

No. 603—STARRETT'S.

Length, inches	2	3	4	6	9	12	18	24
Approximate Width, inches	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{2}$	$1\frac{3}{4}$
Weight per dozen about, lbs.	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$2\frac{1}{4}$	3	6	8
Per dozen	\$3.00	4.20	5.40	7.80	12.00	15.00	24.00	30.00

Sizes 2 to 12 inches Long inclusive, One-Half Dozen; 18 and 24 inches Long, One-Twelfth Dozen in a Cardboard Box.

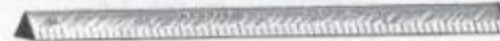


SQUARE.

Steel, Natural Finish; Graduated in 16ths, 32ds, 64ths and 100ths.

Nos.	Length, inches	Width, inches	Weight per doz. about, lbs.	Per Dozen
230	3	$\frac{3}{4}$	$\frac{5}{8}$	\$5.40
232	4	$\frac{3}{4}$	1	7.20
234	6	$\frac{7}{32}$	$1\frac{1}{2}$	10.80

Packed Loose.

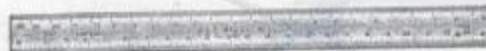


TRIANGULAR.

Steel, Natural Finish; Graduated in 16ths, 64ths and 100ths.

Nos.	Length, inches	Width, inches	Weight per doz. about, lbs.	Per Dozen
240	3	$\frac{3}{4}$	$\frac{1}{2}$	\$6.00
242	4	$\frac{9}{32}$	$\frac{3}{4}$	8.40
244	6	$\frac{11}{32}$	$1\frac{1}{2}$	12.00
246	12	$\frac{7}{16}$	$4\frac{1}{2}$	24.00

Packed Loose.



SHRINKAGE.

Tempered Steel, Natural Finish; Graduated in 8ths, 16ths, 32ds and 64ths.

Nos.	Shrinkage, per foot, inches	Length, inches	Width, inches	Weight Each about, ozs.	Each
212	$\frac{1}{8}$	$24\frac{1}{4}$	1	5	\$3.50
222	$\frac{3}{16}$	$24\frac{3}{4}$	1	5	3.50
226	$\frac{1}{4}$	$24\frac{1}{2}$	1	5	3.50



CALIPER.

Steel, Natural Finish; 3 inches Long; Slide can be Pulled out to Measure $2\frac{1}{4}$ inches; 1 inch Wide, $\frac{1}{8}$ inch Thick.

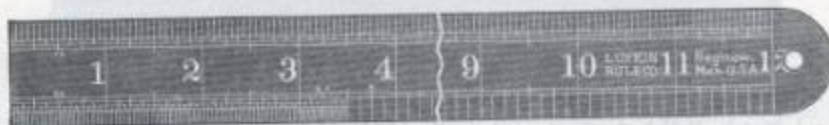
No. 360A	—Graduated in 8, 12, 14, 16, 20, 24, 28, 32, 48, 50, 64 and 100 Parts of an inch	Each
No. 360C	—Graduated in 8, 16, 32 and 64 Parts of an inch	2.00
No. 360D	—Graduated in 8, 16, 32, 64 and 100 Parts of an inch	2.00

Packed Loose; Weight Each about 3 ozs.

MT



STEEL RULES.

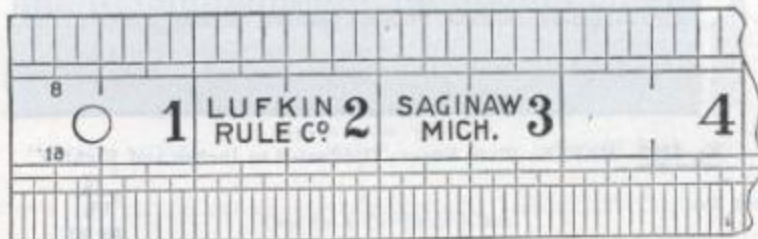


MACHINE DIVIDED.

Tempered Steel, Polished; $1\frac{1}{4}$ inches Wide; 19 Gauge; 1 Rounded End with Hole.

	Per Dozen
No. 2702—12 inch; Graduated on One Side Only; Bottom Edge, the First 3 inches in 32ds, First Half of 4th inch in 64ths, remainder in 8ths; Top Edge in 16ths; Weight per dozen about 2 lbs.	\$6.00
No. 2704—12 inch; Graduated on One Side Only; Bottom Edge in 16ths; Top Edge in Millimeters; Weight per dozen about 2 lbs.	6.00
No. 2705—12 inch; Graduated on One Side Only; Bottom Edge, First inch in 20ths, Second inch in 50ths, Third inch in 100ths, remainder in 10ths; Top Edge, First two inches in 32ds, Third inch in 64ths, remainder in 16ths; Weight per dozen about 2 lbs.	6.60

One-half Dozen in a Cardboard Box.



No. 62. Full Width.

STRAIGHT.

Bright Surface, Distinct Black Sunken Figures and Lines.

No. 62— $1\frac{1}{4}$ inch by 16 Gauge; Graduated on Both Sides; Upper Edge 8ths, Lower Edge 16ths.

Length, feet	$\frac{3}{7}$	$\frac{4}{10\frac{1}{2}}$
Weight per dozen about, lbs.	7	10 $\frac{1}{2}$
Per dozen	\$22.00	28.00

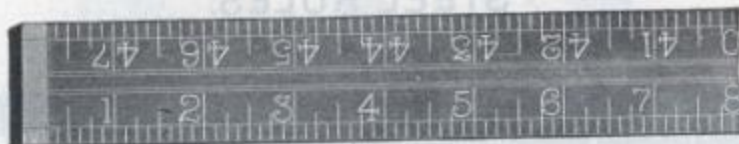
No. 60— $\frac{3}{4}$ inch by 20 Gauge; Graduated on Both Sides; 8ths on One Side and 16ths on the other; Marked on Lower Edge Only; Machine Divided.

Length, feet	$\frac{1}{1}$	$\frac{2}{2}$
Weight per dozen about, lbs.	1	2
Per dozen	\$4.00	8.00

Packed Loose.



WOOD RULES.



FLAT.

Maple, Natural Finish, Polished; Graduated on One Side in Inches and Eighths, and on the other side in Inches and Sixteenths, on Both Edges.

Brass Capped.

	Per Dozen
No. 7131—24 INCH; 1½ by 3/16; Weight per dozen about 3 lbs.	\$3.60
No. 7132—36 INCH; 1½ by 3/16; Weight per dozen about 4 lbs.	7.80
No. 7133—48 INCH; 1½ by ¼; Weight per dozen about 6 lbs.	11.20
No. 7134—60 INCH; 1½ by ¼; Weight per dozen about 8 lbs.	18.00
No. 7135—72 INCH; 1½ by ¼; Weight per dozen about 10 lbs.	27.00

Brass Bound.

	Per Dozen
No. 7131½—24 INCH; 1½ by 3/16; Weight per dozen about 3 lbs.	\$13.80
No. 7132½—36 INCH; 1½ by 3/16; Weight per dozen about 4 lbs.	24.00
No. 7133½—48 INCH; 1½ by ¼; Weight per dozen about 6 lbs.	36.00
No. 7134½—60 INCH; 1½ by ¼; Weight per dozen about 8 lbs.	54.00
No. 7135½—72 INCH; 1½ by ¼; Weight per dozen about 10 lbs.	72.00

One-half Dozen in a Package.

DESK RULES.

Finished in Natural Color and Highly Polished; 1½ inches Wide; 5/16 inch Thick.



No. 7102—MAPLE; Plain Edges; Graduated in Inches and Eighths.

Length, inches	12	15	18
Weight per dozen about, lbs.	1¾	2	2½
Per dozen	\$0.90	1.15	1.40

No. 7202—BOXWOOD; Plain Edges; Graduated in Inches and Sixteenths.

Length, inches	12	15	18
Weight per dozen about, lbs.	2	2¾	3¾
Per dozen	\$4.80	5.40	6.00



No. 7103—MAPLE; One Inlaid Brass Edge; Graduated in Inches and Eighths.

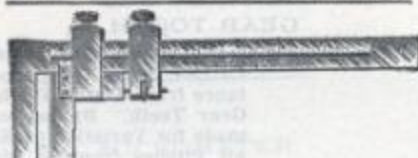
Length, inches	12	15	18
Weight per dozen about, lbs.	1¾	2¼	2¾
Per dozen	\$1.75	1.90	2.60

No. 7203—BOXWOOD; One Inlaid Brass Edge; Graduated in Inches and Sixteenths.

Length, inches	12	15	18
Weight per dozen about, lbs.	2	2¾	3
Per dozen	\$5.40	7.20	9.00

One Dozen in a Cardboard Box.

CALIPER SQUARES.



Polished Steel, Natural Finish; 4, 6 and 9 inch Sizes take Inside as well as Outside Measurements; The 6 and 9 inch have Hardened Jaws; These Squares can be furnished with any of the following Three Styles of Graduations: English, Graduated on One Side to Read to 64ths and on the other to 100ths of an inch; Metric, Graduated to read $\frac{1}{2}$ m/m on One Side and to 1 m/m on the other; Metric and English, Graduated to read to $\frac{1}{2}$ m/m on One Side and to 100ths of an inch on the other.

In ordering specify graduations wanted.

	Size, inches.	Length of Jaws, inches.	Width of Jaws closed, inches.	Weight Each, ozs.	With adjusting screw, Each.	Without adjusting screw, Each.
No. 700	2	$\frac{3}{4}$	..	1	\$3.50	\$2.25
No. 702	4	$1\frac{1}{2}$	$\frac{1}{2}$	$3\frac{1}{2}$	4.50	3.50
No. 704	6	2	1	$9\frac{1}{2}$	7.50	5.50
No. 706	9	$3\frac{1}{4}$	1	$15\frac{1}{2}$	11.00	9.00

Packed Loose.



STARRETT'S.

Tool Steel, Polished; For Both Outside and Inside Measure; The Beam is Graduated in 64ths on One Side and 100ths on the other.

With Adjusting Screw.

	Measures, inches.	Length over all, inches.	Weight Each, ozs.	Each
No. 25A	3	4	5	\$3.50
No. 25B	4	5	5	4.00

Without Adjusting Screw.

	Measures, inches.	Length over all, inches.	Weight Each, ozs.	Each
No. 25D	3	4	5	\$3.00
No. 25F	4	5	5	3.50

One in a Cardboard Box.



MICROMETER.

Polished Steel.

For Outside and Inside Measure.

This Instrument enables one to Enlarge or Decrease work One or More Thousandths from that Calipered, and fills the bill for both a First-class Caliper Square and Micrometer of Large Scope and Quick Adjustment. The Jaws are $1\frac{1}{2}$ inches Long, Hardened, and Open 4 inches. One Side of the Beam is Graduated in 64ths and the other in 40ths, and Either Side may be used as a Common Caliper Square, or, through the Micrometer, to show 1000ths Full Length, on either Inside or Outside Work. An Excellent Feature of this Instrument is the Spiral Spring between Jaw and Clasp, which not only takes up all Back-lash, but limits the pressure against the work to strength of Spring.

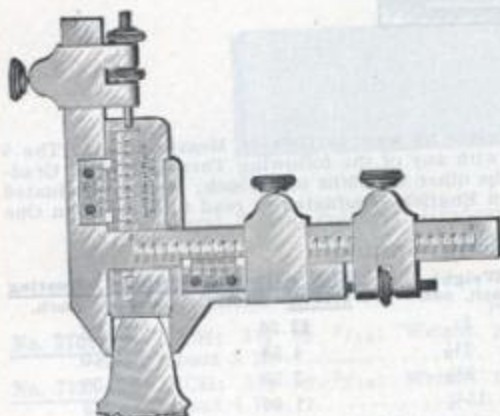
	Each
No. 28C—4 inch; IN LEATHERETTE CASE; Weight each about 1 lb.	\$8.75
No. 28 —4 inch; WITHOUT LEATHERETTE CASE; Weight each about $\frac{1}{2}$ lb.	8.00
No. 28M & E—4 inch; Same as No. 28, except that the Beam is Graduated on One Side in $\frac{1}{2}$ Millimeters and on the other in 100ths of an inch, and the Micrometer is Graduated to read in 100ths of a Millimeter; IN LEATHERETTE CASE; Weight each about 1 lb.	8.75

Packed Loose.



CALIPERS.

GEAR TOOTH.



Steel, Natural Finish; English or Metric Measure. This Caliper is for the purpose of Accurately Measuring the Distance from Top to Pitch Line, and Thickness at Pitch Line of Gear Teeth. By use of this Caliper compensation may be made for Variation or Error in Size of Blank. It will Measure all Pitches from 20 Diametral to 2 Diametral. The Sliding Jaw moves upon a Bar Graduated to read by means of a Vernier to Thousandths of an Inch. A Tongue, moving at Right Angles with the Jaws, is Graduated in the same manner.

This Caliper is also Graduated to read to $\frac{1}{50}$ of a Millimeter and Measures all Pitches from $1\frac{1}{4}$ m/m to 12 m/m.

Both the Sliding Jaw and Tongue are equipped with Adjusting Screws.

	Each
No. 670—ENGLISH MEASURE; Weight each about $\frac{1}{2}$ lb.	\$25.00
No. 671—METRIC MEASURE; Weight each about $\frac{1}{2}$ lb.	25.00

Packed Loose.



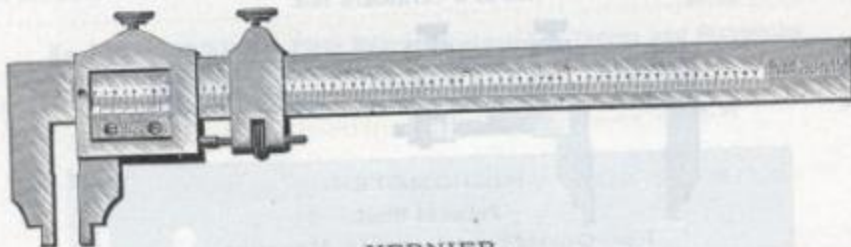
POCKET VERNIER.

Polished Steel, Natural Finish, with Hardened Jaws; English and Metric Measure; This Pocket Vernier Caliper is Graduated on the Front to read by means of a Vernier to Thousandths of an Inch; It is Graduated on the Back to 64ths of an inch; The Jaws are $\frac{3}{4}$ inch Long, $\frac{1}{4}$ inch Wide when closed, and take Inside as well as Outside Measurements. The Caliper Measures to $1\frac{11}{16}$ inches Outside Diameter.

This Caliper can be furnished Graduated to Millimeters in place of 64ths of an inch, with a Vernier to read 50ths of a Millimeter, at the same price, when so specified.

An explanation of the Vernier is sent with each Caliper.

	Each
No. 680C—IN MOROCCO CASE; Weight each about 4 ozs.	\$10.50
No. 680 —WITHOUT CASE; Weight each about 2 ozs.	10.00



VERNIER.

Steel, Natural Finish; IN MOROCCO CASE; These Calipers are Graduated on the Front to read, by means of a Vernier, to Thousandths of an Inch; They are Graduated on the Back to 64ths of an Inch; The Jaws are Hardened and Ground and take Inside as well as Outside Measurements; Points are placed on the Bars and Slides so that Dividers can be set to Transfer Distances.

These Calipers can also be furnished Graduated on one Side to read to $\frac{1}{50}$ of a Millimeter and to Thousandths of an Inch on the other, at the same price, when so specified.

An explanation of the Vernier is sent with each Caliper.

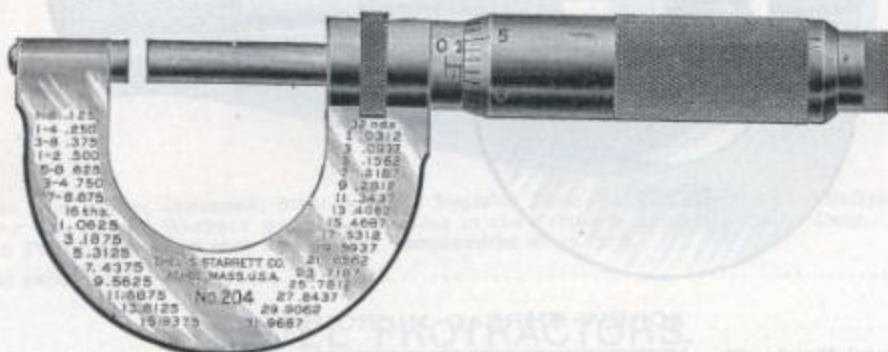
	Size, inches.	Length of Jaws, inches.	Width of Jaws, closed, inches.	Weight each about, lbs.	Each.
No. 682	6	$1\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{4}$	\$15.00
No. 686	12	$2\frac{1}{4}$	$\frac{2}{10}$	2	20.00
No. 688	24	$2\frac{1}{4}$	$\frac{3}{10}$	4	25.00

Packed Loose.



CALIPERS.

MICROMETER.



Polished Steel.

This is rightly termed a Quick Adjusting Micrometer because it can be instantly opened or closed to any point within its Capacity, and this is done WITHOUT IMPAIRING ITS ACCURACY OR SENSITIVENESS IN THE SLIGHTEST DEGREE. Forty complete Revolutions of the Screw are required to Open or Close an ordinary 1 inch Micrometer its Full Length, taking approximately twenty seconds. This time is practically saved by the use of this Tool. To operate the Micrometer it is only necessary to press with the finger against the end of the Plunger, this immediately releases the Nut, Disengaging it from the Screw, when any Adjustment within an inch may be instantly made; Releasing the pressure, the Nut instantly Engages the Screw, when Fine Adjustments may be made in the usual way. This Micrometer also has a Patented Sleeve and Lock-nut as well as a Ratchet Stop. For Measuring by Thousandths up to One inch; Length over all $5\frac{1}{2}$ inches.

Each

No. 204—As Described above, in Leatherette Case; Weight each about $\frac{1}{2}$ lb. \$10.50

No. 205—As Described above, except for Measuring by Ten Thousandths up to One inch; In Leatherette Case; Weight each about $\frac{1}{2}$ lb. 11.50

One in a Wood Box.



IMPROVED.

Each

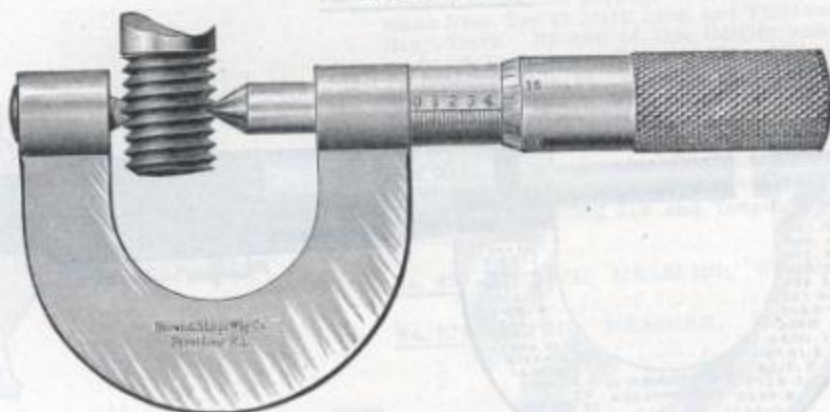
No. 15—Milled from Finest Tool Steel, Tempered and Polished; Knurled Grip; Capacity 1 inch; Graduated in Thousandths of an inch; Decimal Equivalents of Fractions of an inch shown on Both Sides of Frame, 8ths, 16ths and 32ds on One Side, 64ths on Reverse Side; Width of Frame $\frac{5}{8}$ inch; Thickness $\frac{1}{4}$ inch; Diameter of Grip $\frac{1}{2}$ inch; Length over all, Closed, $4\frac{1}{4}$ inches; Weight each about 8 ozs. \$5.50

One in a Morocco Covered Plush Lined Case.



CALIPERS.

Cuts full size.



SCREW THREAD MICROMETER.

Steel, Natural Finish. These Calipers are intended for the Accurate Measurement of V-Thread on Screws, Standard Screws, Taps, Thread Gauges, etc., by Measuring the Actual Thread.

	Each
No. 690— $\frac{1}{2}$ inch; RANGE 48 TO 64 PITCH; For V-Thread only; Weight each about 3 ozs.....	\$7.00
No. 691—1 inch; RANGE 8 TO 13 PITCH; For V or U. S. S. Thread; Weight each about $6\frac{1}{2}$ ozs.....	7.50
No. 693—1 inch; RANGE 14 TO 20 PITCH; For V or U. S. S. Thread; Weight each about $6\frac{1}{2}$ ozs.....	7.50
No. 692—1 inch; RANGE 22 TO 30 PITCH; For V-Thread Only; Weight each about $6\frac{1}{2}$ ozs.....	7.50
No. 694—1 inch; RANGE 32 TO 40 PITCH; For V-Thread Only; Weight each about $6\frac{1}{2}$ ozs.....	7.50
No. 695—2 inch; RANGE $4\frac{1}{2}$ TO 7 PITCH; For V or U. S. S. Thread; Weight each about $8\frac{1}{2}$ ozs.....	9.00



INSIDE MICROMETER.

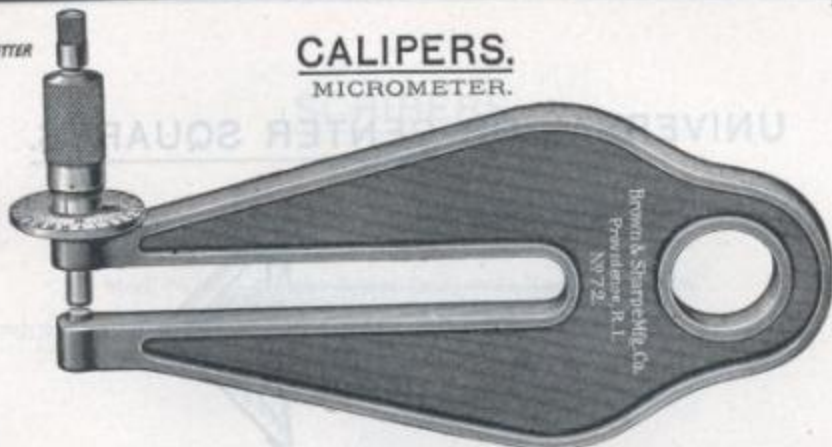
Steel, Natural Finish; English and Metric Measures; These Calipers are intended to meet the demand for a Tool adapted to Measuring Small Internal Dimensions. They are Graduated to read to Thousandths of an inch by English Measure, and to Hundredths of a Millimeter by Metric Measure; The Measuring Screw is Entirely Enclosed, thus protecting it from Injury; The Measuring Surfaces are Hardened and Ground to a Radius to Insure Accurate Measurements and prevent cramping when Measuring Parallel Surfaces; Each Caliper is provided with a Clamp Screw to Preserve the Setting.

	Each
No. 806 —ENGLISH MEASURE; Measures .200 to 1 inch; Weight each about $4\frac{1}{2}$ ozs.....	\$5.00
No. 807 —ENGLISH MEASURE; Measures 1 to 2 inches; Weight each about 5 ozs.....	6.00
No. 806A—METRIC MEASURE; Measures 5 to 25 m/m; Weight each about $4\frac{1}{2}$ ozs.....	5.00
No. 807A—METRIC MEASURE; Measures 25 to 50 m/m; Weight each about 5 ozs.....	6.00
Morocco Cases for Nos. 806 and 806A.....	.50
Morocco Cases for Nos. 807 and 807A.....	.75

Packed Loose.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

CALIPERS. MICROMETER.



Malleable Iron Frame, Japanned; Steel Bolt and Register Plate, Natural Finish. This Caliper will be found well adapted for Sheet Metal Workers' use. The Opening in the Frame is about $4\frac{1}{2}$ inches Deep. It Measures all Sizes Less than Four-tenths of an inch by One-half Thousandths of an inch.

No. 72—Weight each about $1\frac{1}{4}$ lbs. Each \$7.00

BEVEL PROTRACTORS.

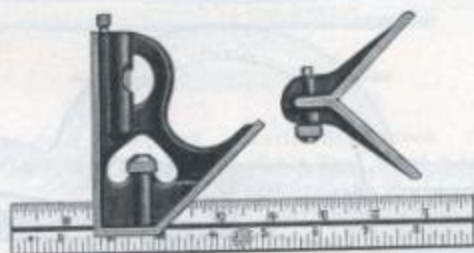


KEEN KUTTER *

Maroon Finish Gray Iron Head; Highest Grade Crucible Steel Blade, Polished and Tempered. Held in a Revolving Turret by a Round-Ended Bolt; Turret is Accurately Fitted and Graduated to 90 Degrees either Side of Zero; Blade Graduated in inches, 8ths, 16ths, 32ds and 64ths on Both Sides.

Nos.	K 109	K 112
Length of Blade, inches	9	12
Length of Head, inches	7	7
Weight per dozen about, lbs.	11	13
Per dozen	\$33.00	36.00

COMBINATION SQUARES.



KEEN KUTTER *

Maroon Finish Gray Iron Head; Highest Grade Crucible Steel Blade, Polished and Tempered; Blade Accurately Ground and Engine Graduated in inches, 8ths and 16ths on One Side, and 32ds and 64ths on the other. Head Fitted with Level and Scribing Point.

With Center Head.

Nos.	K 60	K 90	K 120
Length of Blade, inches	6	9	12
Length of Head, inches	$3\frac{1}{2}$	4	$4\frac{1}{2}$
Weight per dozen about, lbs.	9	12	13
Per dozen	\$18.00	21.00	24.00

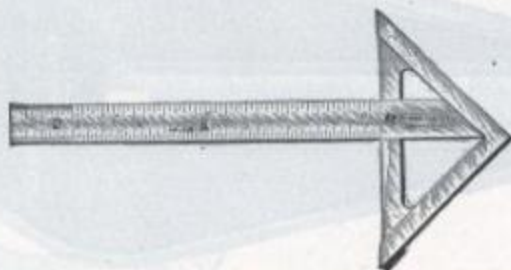
Without Center Head.

Nos.	K 9	K 12
Length of Blade, inches	9	12
Length of Head, inches	4	$4\frac{1}{2}$
Weight per dozen about, lbs.	$9\frac{1}{2}$	11
Per dozen	\$15.00	18.00

One-twelfth Dozen in a Cardboard Box.



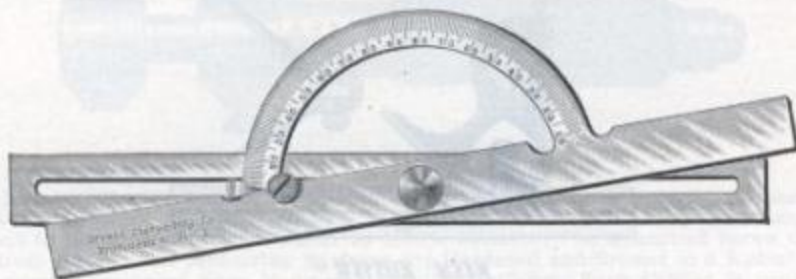
UNIVERSAL OR CENTER SQUARES.



Steel, Natural Finish; Graduated on One Side Only; The 4 inch Blade is Graduated to 32ds of an inch on the First Corner and to 20ths of an inch on the Second Corner. The 6, 8, 10 and 12 inch Blades are Graduated on the First Corner to 16ths of an inch, the Last inch of the First Corner is Graduated to 32ds of an inch; The Second Corner is Graduated to 12ths of an inch; The Last inch of the Second Corner is Graduated to 48ths of an inch.

	Length of Blade, inches.	Length of Head, inches.	Width of Blade, inches.	Weight each about, lbs.	Each
No. 650	4	3	$\frac{7}{16}$	$\frac{1}{4}$	\$2.00
No. 652	6	4	$\frac{9}{16}$	$\frac{3}{4}$	2.50
No. 654	8	$5\frac{1}{2}$	$\frac{3}{4}$	1	3.50
No. 656	10	7	$1\frac{1}{8}$	$1\frac{1}{4}$	5.00
No. 658	12	$8\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	6.00

BEVEL PROTRACTORS.



Steel, Natural Finish; Half Circle Divided into Degrees.

	Length of Sliding Arm, inches.	Weight each, about ozs.	Each.
No. 490	6	5	\$4.50
No. 492	10	$7\frac{1}{2}$	5.75

Packed Loose.

MT



SCRIBERS.



Steel, Natural Finish; Points Tempered; Knurled Holders.

Per Dozen

No. 835—SINGLE POINT; Length 5 inches; Weight per dozen about $\frac{1}{2}$ lb. \$3.60



Steel, Natural Finish; Points Tempered; Knurled Holders.

Per Dozen

No. 836—DOUBLE POINT; Length 8 inches; Weight per dozen about $\frac{3}{4}$ lb. \$4.20

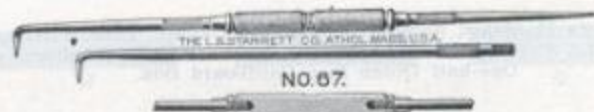
Packed Loose.



This Tool is made from Steel Tubing, Knurled and Nickel Plated; The Scriber is made from the Best Quality of Steel, Tempered, and is held by a Knurled Chuck. The Scriber is Reversible, Telescoping into the Stock, and is held by a Slight Turn of the Chuck so that it is always as safe to carry in the pocket as a penknife.

Per Dozen

No. 70— $4\frac{3}{4}$ inches Long; Weight per dozen about $1\frac{1}{2}$ lbs. \$3.00



NO. 67.

Points made of Fine Grade of Steel, Tempered. Knurled Steel Stock. The Long Bent Point will be found a Valuable Help for reaching through holes; Length with Short Bent Point 9 inches; With Long Point 12 inches.

Per Dozen

No. 67—Complete with Long and Short Point; Weight per dozen about $2\frac{3}{4}$ lbs. \$5.40



THE L.S. STARRETT CO. NO. 68 ATHOL MASS. U.S.A.

Knurled Steel Sleeves, Nickel Plated. Tempered Steel Points, Polished. Length 8 inches.

Per Dozen

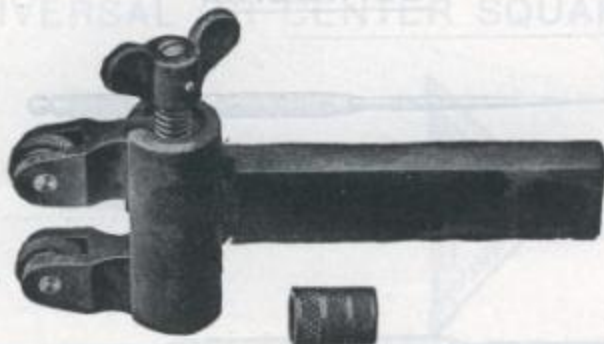
No. 68 —WITHOUT KNIFE POINT; Weight per dozen about $1\frac{1}{2}$ lbs. \$6.00

No. 68K—WITH KNIFE POINT; Weight per dozen about $1\frac{3}{4}$ lbs. 7.80

One-half Dozen in a Cardboard Box.



KNURLING TOOL.



IMPROVED

For use in Engine Lathe.

Made of Tool Steel; The Movable Arms holding the Knurls in connection with the Rocking Joint, have a Positive Opening and Closing Movement in Parallel Lines, actuated by a Right and Left Hand Screw, moving the Knurls toward and from each other; The Knurls Center themselves to the work.

No. 15—KNURL HOLDER WITHOUT KNURL; Size of Shank $\frac{1}{2} \times 1 \times 4$ inches; Length over all $6\frac{1}{4}$ inches; Each
Weight each about $1\frac{1}{2}$ lbs. \$4.25

Per Pair

Knurls for No. 15 Holders \$0.75
Packed Loose.

NOTE.—In ordering, be sure to state whether FINE, MEDIUM OR COARSE KNURLS are wanted.

KNURL HOLDERS.



ADJUSTABLE.

No. 20—Soft Steel, Polished, with Hardened Spindle; Applewood Handle; Length over all 10 inches; WILL
HOLD ALL SIZE KNURLS SHOWN ON FOLLOWING PAGE; Weight per dozen about 4 lbs. \$5.00
One-half Dozen in a Cardboard Box.

Per Dozen

KNURL SETS.



No. 12—Contains One No. 20 Adjustable Knurl Holder and 12 Assorted Knurls in a Hardwood Box; Length
of Box $11\frac{1}{4}$ inches; Weight per set about $1\frac{1}{2}$ lbs. \$5.00
Packed Loose.

Per Set



KNURLS.

TOOL STEEL, HARDENED AND POLISHED.

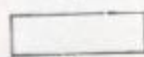
NUMBERS indicate SHAPE and WIDTH OF FACE, LETTERS indicate DESIGN.



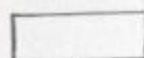
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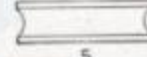
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1



3



5



7

Examples.

No. 8A is a Wide Flat Face Knurl with Fine Straight Lines.

No. 7C is a Wide Concave Face Knurl with Coarse Straight Lines.



A



B



C



D



E



F



G



H



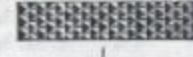
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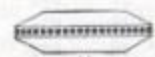
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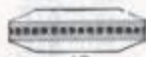
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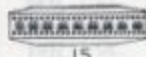
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13



14



15



16

Cuts Full Size.

Nos. 1 to 16, Inclusive.

Per Dozen
\$6.00

Packed Loose; Weight per Dozen about 1/4 lb.



SCREW SLOTTING CUTTERS.



Tempered Steel, Natural Finish. These Cutters have a Fine Pitch of Teeth especially adapted for the Slotting of Screw Heads and Similar Work. They are Not Ground on the Sides.

No.	Diameter of Screw Head to be Slotted.	Thickness of Cutter by Am. Standard Wire Gauge, No.	Thickness of Cutter in Decimals.	Diameter of Cutter, inches.	Size of Hole, inches.	Each.	No.	Diameter of Screw Head to be Slotted.	Thickness of Cutter by Am. Standard Wire Gauge, No.	Thickness of Cutter in Decimals.	Diameter of Cutter, inches.	Size of Hole, inches.	Each.
H10	.....	5	.182	2 3/4	1	\$0.70	H36H	.....	17	.045	2 3/4	5/8	\$0.15
H11	.....	6	.162	2 3/4	1	.60	H36/I	.....	18	.040	2 3/4	5/8	.15
H12	.....	7	.144	2 3/4	1	.50	H36J	.....	19	.035	2 3/4	5/8	.15
H13	3/8	8	.128	2 3/4	3/4, 1	.45	H37	3/16	20	.032	2 3/4	1/2, 3/4, 5/8	.15
H14	1/2	9	.114	2 3/4	3/4, 1	.40	H38	1/4	21	.028	2 3/4	1/2, 3/4, 5/8	.15
H15	5/8	10	.102	2 3/4	3/4, 1	.35	H39	.....	22	.025	2 3/4	1/2, 3/4, 5/8	.15
H16	.....	11	.091	2 3/4	3/4, 1	.30	H40	.....	23	.023	2 3/4	1/2, 3/4, 5/8	.15
H17	3/4	12	.081	2 3/4	3/4, 1	.25	H41	.....	24	.020	2 3/4	1/2, 3/4, 5/8	.15
H18	.....	13	.072	2 3/4	3/4, 1	.20	H42	.....	25	.018	2 3/4	1/2, 3/4, 5/8	.15
H19	7/8	14	.064	2 3/4	1/2, 3/4, 5/8, 1	.20	H43	.....	26	.016	2 3/4	1/2, 3/4, 5/8	.15
H20	1 1/32	15	.057	2 3/4	1/2, 3/4, 5/8, 1	.15	H44	.....	27	.014	2 3/4	1/2, 3/4, 5/8	.15
H21	5/16	16	.051	2 3/4	1/2, 3/4, 5/8, 1	.15	H45	.....	28	.012	2 3/4	1/2, 3/4, 5/8	.15
H22	9/32	17	.045	2 3/4	1/2, 3/4, 5/8, 1	.15	H46	.....	30	.010	2 3/4	1/2, 3/4, 5/8	.15
H23	1/4	18	.040	2 3/4	1/2, 3/4, 5/8, 1	.15	H47	.....	32	.008	2 3/4	1/2, 3/4, 5/8	.15
H24	7/32	19	.035	2 3/4	1/2, 3/4, 5/8, 1	.15	H48	.....	34	.006	2 3/4	1/2, 3/4, 5/8	.15
H25	3/16	20	.032	2 3/4	1/2, 3/4, 5/8, 1	.15	H49	5/8	14	.064	1 3/4	5/8	.15
H26	1/8	21	.028	2 3/4	1/2, 3/4, 5/8, 1	.15	H50	1 1/32	15	.057	1 3/4	5/8	.15
H27	.....	22	.025	2 3/4	1/2, 3/4, 5/8, 1	.15	H51	5/16	16	.051	1 3/4	5/8	.15
H28	.....	23	.023	2 3/4	1/2, 3/4, 5/8, 1	.15	H52	9/32	17	.045	1 3/4	5/8	.15
H29	.....	24	.020	2 3/4	1/2, 3/4, 5/8, 1	.15	H53	1/4	18	.040	1 3/4	5/8	.15
H30	.....	25	.018	2 3/4	1/2, 3/4, 5/8, 1	.15	H54	7/32	19	.035	1 3/4	5/8	.15
H31	.....	26	.016	2 3/4	1/2, 3/4, 5/8, 1	.15	H55	3/16	20	.032	1 3/4	5/8	.15
H32	.....	27	.014	2 3/4	1/2, 3/4, 5/8, 1	.15	H56	1/8	21	.028	1 3/4	5/8	.15
H33	.....	28	.012	2 3/4	1/2, 3/4, 5/8, 1	.15	H57	.....	22	.025	1 3/4	5/8	.15
H34	.....	30	.010	2 3/4	1/2, 3/4, 5/8, 1	.15	H58	.....	23	.023	1 3/4	5/8	.15
H35	.....	32	.008	2 3/4	1/2, 3/4, 5/8, 1	.15	H59	.....	24	.020	1 3/4	5/8, 1/2, 5/8	.12
H36	.....	34	.006	2 3/4	1/2, 3/4, 5/8, 1	.15	H60	.....	25	.018	1 3/4	5/8, 1/2, 5/8	.12
H36A	.....	10	.102	2 3/4	5/8	.30	H61	.....	26	.016	1 3/4	5/8, 1/2, 5/8	.12
H36B	.....	11	.091	2 3/4	5/8	.25	H62	.....	27	.014	1 3/4	5/8, 1/2, 5/8	.12
H36/C	.....	12	.081	2 3/4	5/8	.20	H63	.....	28	.012	1 3/4	5/8, 1/2, 5/8	.12
H36D	.....	13	.072	2 3/4	5/8	.15	H64	.....	30	.010	1 3/4	5/8, 1/2, 5/8	.12
H36E	.....	14	.064	2 3/4	5/8	.15	H65	.....	32	.008	1 3/4	5/8, 1/2, 5/8	.12
H36F	.....	15	.057	2 3/4	5/8	.15	H66	.....	34	.006	1 3/4	5/8, 1/2, 5/8	.12
H36G	.....	16	.051	2 3/4	5/8	.15							

These Cutters are Light and can be easily Sent by Mail.



GAUGE GLASSES OR TUBES.



Moncrieff's GENUINE SCOTCH.

With Fused Ends.

 $\frac{1}{2}$ inch, Outside Diameter.

Length, inches.....	10	12	14	16
Weight per dozen about, lbs....	2 $\frac{1}{4}$	2 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{1}{2}$
Per dozen.....	\$3.00	3.60	4.20	4.80

 $\frac{3}{4}$ inch, Outside Diameter.

Length, inches.....	10	11	12	13	14	15	16
Wgt. doz. about, lbs.	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2 $\frac{3}{4}$	3	3 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$
Per dozen.....	\$3.00	3.24	3.60	3.84	4.20	4.44	4.80

 $\frac{1}{2}$ inch, Outside Diameter.

Length, inches.....	10	12	13	14	15	16	18
Wgt. doz. about, lbs.	2 $\frac{1}{4}$	2 $\frac{3}{4}$	3	3 $\frac{1}{4}$	3 $\frac{1}{2}$	3 $\frac{3}{4}$	4
Per dozen.....	\$3.60	4.32	4.80	5.16	5.52	5.88	6.60

One-half Dozen in a Package.

LUBRICATOR GLASSES.



MONCRIEFF'S GENUINE SCOTCH,

For Cylinder Lubricators.

 $\frac{1}{2}$ inch, Outside Diameter.

Length, inches.....	3	4
Weight per dozen about, lbs.....	$\frac{3}{4}$	1 $\frac{1}{4}$
Per dozen.....	\$1.40	1.60

 $\frac{3}{4}$ inch, Outside Diameter.

Length, inches.....	2 $\frac{1}{2}$	3	3 $\frac{1}{4}$	3 $\frac{1}{2}$	4
Weight dozen about, lbs.	$\frac{3}{4}$	$\frac{1}{2}$	1	1	1 $\frac{1}{4}$
Per dozen.....	\$1.60	1.70	1.85	1.85	2.00
Length, inches.....	4 $\frac{1}{4}$	4 $\frac{1}{2}$	4 $\frac{3}{4}$	5	
Weight dozen about, lbs.....	1 $\frac{1}{4}$	1 $\frac{1}{2}$	1 $\frac{3}{4}$	1 $\frac{3}{4}$	
Per dozen.....	\$2.00	2.00	2.00	2.25	

One Dozen in a Package.

RUBBER GASKETS.



Pure Black Rubber Gaskets or Rings for Gauge Glasses.

$\frac{1}{2}$ inch Inside Diameter; $\frac{3}{4}$ inch Outside Diameter; $\frac{1}{4}$ inch Thick; Weight per gross about 12 ozs.....	\$2.00
$\frac{3}{4}$ inch Inside Diameter; 1 inch Outside Diameter; $\frac{1}{4}$ inch Thick; Weight per gross about 13 ozs.....	2.00
Packed Loose.	

INDEXED DRILL CASES.



No. 5A.



No. 8A.

Without Drills; For Morse Twist Drills.

Polished Hardwood Mahogany Finish Solid Block; Nickel Plated Brass Cover; Series of Holes arranged in Concentric Circles in the Block. The Different Size Drills that the Case contains are stamped around edge of Cover; Holes to admit Drills in Cover are opened by moving Knurled Knob to Groove of size of Drill to register with sizes on edge of cover; Size of Drill wanted is obtained by bringing Size on Edge of Cover in line with a Small Brass Index Mark, and by inverting the Case Selected Drill will drop out.

Each

- No. 5A—HOLDS 29 STRAIGHT SHANK DRILLS,**
 $\frac{1}{16}$ to $\frac{1}{2}$ inch, by 64ths; Height 6 $\frac{1}{4}$ inches;
 Diameter 3 $\frac{1}{4}$ inches; Weight each about 1 $\frac{1}{4}$ lbs \$1.25
- No. 6A—HOLDS 15 STRAIGHT SHANK DRILLS,**
 $\frac{1}{16}$ to $\frac{1}{2}$ inch, by 32nds; Height 6 $\frac{1}{4}$ inches;
 Diameter 3 $\frac{1}{4}$ inches; Weight each about 1 $\frac{1}{4}$ lbs 1.25

- No. 12A—HOLDS 13 MACHINE BITS, $\frac{1}{8}$ to $\frac{1}{2}$ inch**
 by 32nds; Height 6 $\frac{1}{4}$ inches; Diameter 2 $\frac{1}{4}$ inches; Weight each about 1 $\frac{1}{4}$ lbs..... 1.25

- No. 13A—HOLDS 18 BIT STOCK DRILLS, $\frac{1}{16}$ to $\frac{1}{4}$**
 inch by 32nds; $\frac{3}{16}$ to $\frac{1}{2}$ inch by 16ths;
 Height 6 $\frac{1}{4}$ inches; Diameter 2 $\frac{1}{4}$ inches;
 Weight each about 1 lb..... 1.25

- No. 9A—HOLDS HALF SET DRILLS; Alternate Num-**
 bers from 1 to 59; Height 4 $\frac{1}{2}$ inches; Diameter
 2 $\frac{3}{8}$ inches; Weight each about 1 $\frac{1}{2}$ lb 1.25

Nos. 5A, 9A, One in an Imitation Leather Covered Box; Nos. 6A, 12A and 13A, One in a Carton.

SPEED INDICATORS.

Used to find speed of revolving Axes or Spindles, or any kind of machinery.

STARRETT'S.



Nickel Plated Cast Steel Frame; Fitted with Rubber Tips for Pointed and Hollow Centers; Working Parts encased in Frame; By a pressure and twist with thumb the Indicator Plate is loosened so that the Indicator may be moved to any point; Registers 100 Revolutions; Length over all 5 1/4 inches.

	Each		Each
No. 104—RIGHT OR LEFT HAND; Nickel Plated Cast Steel Handle; Weight each about 5 ozs.	\$1.00	No. 106—RIGHT OR LEFT HAND; Mahogany Handle; Weight each about 5 ozs.	\$1.50



	Each
No. 1—RIGHT HAND; Nickel Plated Cast Iron Frame and Handle; Steel Spindle and Tip; Registers 100 Revolutions; Length over all 3 3/4 inches; Weight each about 3 ozs.	\$1.50
No. 10—TABOR, RIGHT HAND; Nickel Plated Cast Iron Frame and Handle; Steel Spindle and Tip; Registers 5000 Revolutions; Length over all 4 inches; Weight each about 4 ozs.	1.50
No. 12—ALARM, RIGHT OR LEFT HAND; Nickel Plated Cast Iron Frame and Handle; Steel Spindle and Point; Nickel Plated Steel Alarm Bell, 1 1/4 inches in Diameter, which rings when Indicator shows 100 Revolutions; Registers 100 Revolutions; Length over all 3 3/4 inches; Weight each about 4 1/2 ozs.	1.50

One in a Cardboard Box.

CENTER KEYS.



For Sockets and Sleeves.

Drop Forged Steel, Natural Finished and Hardened.

	For Socket or Sleeve No.	Weight Each about, ozs.	Each.
No. 100/C/1	1	1 1/2	\$0.80
No. 100/C/2	2	2 3/4	.95
No. 100/C/3	3	5 1/2	1.10
No. 100/C/4	4	11 3/4	1.40
No. 100/C/5	5	19	1.60

Packed Loose.

STEEL SOCKETS.



Morse Taper Sockets for Taper Shank Drills.

Finest Tool Steel.

	Each
No. 100/1—Holds Drills $\frac{1}{4}$ to $\frac{19}{32}$ inch, inclusive; Diameter of Blank End $1\frac{1}{4}$ inches; Extreme Length 7 inches; Weight each about 2 lbs.	\$1.20
No. 100/2—Holds Drills $\frac{5}{16}$ to $\frac{29}{64}$ inch, inclusive; Diameter of Blank End $1\frac{1}{4}$ inches; Extreme Length 8 inches; Weight each about 3 lbs.	1.80
No. 100/3—Holds Drills $\frac{15}{16}$ to $1\frac{1}{4}$ inches, inclusive; Diameter of Blank End $1\frac{1}{2}$ inches; Extreme Length 10 inches; Weight each about 5 lbs.	2.50
No. 100/4—Holds Drills $1\frac{1}{2}$ to 2 inches, inclusive; Diameter of Blank End 2 inches; Extreme Length 13 inches; Weight each about 11 lbs.	4.00
±No. 100/5—Holds Drills $2\frac{1}{8}$ to 3 inches, inclusive; Diameter of Blank End $2\frac{1}{2}$ inches; Extreme Length 15 inches; Weight each about 20 lbs.	7.50
±No. 100/6—Holds Drills $3\frac{1}{8}$ to 4 inches, inclusive; Diameter of Blank End 3 inches; Extreme Length 18 inches; Weight each about 21 lbs.	14.00



For Morse Taper Shank Drills.

Finest Tool Steel.

	Each		Each
No. 100A1/2—With Shank Fitted to Nos. 100/2, 100A4 and 100B4 Sockets; Weight each about 1 lb.	\$2.00	±No. 100A2/5—With Shank Fitted to Nos. 100/5, 100A5 and 100B5 Sockets	\$4.80
No. 100A2/3—With Shank Fitted to Nos. 100/3, 100A3 and 100B3 Sockets; Weight each about $1\frac{1}{2}$ lbs.	2.50	±No. 100A3/2—With Shank Fitted to Nos. 100/2, 100A2 and 100B2 Sockets	3.20
No. 100A3/4—With Shank Fitted to Nos. 100/4, 100A2 and 100B2 Sockets; Weight each about 3 lbs.	3.20	±No. 100A3/3—With Shank Fitted to Nos. 100/3, 100A3 and 100B3 Sockets	3.20
±No. 100A4/5—With Shank Fitted to Nos. 100/5, 100A5 and 100B5 Sockets; Weight each about 5 lbs.	4.80	±No. 100A3/5—With Shank Fitted to Nos. 100/5, 100A5 and 100B5 Sockets	4.80
±No. 100A1/3—With Shank Fitted to Nos. 100/3, 100A3 and 100B3 Sockets	2.50	±No. 100A4/3—With Shank Fitted to Nos. 100/2, 100A3 and 100B3 Sockets	4.80
±No. 100A1/4—With Shank Fitted to Nos. 100/4, 100A4 and 100B4 Sockets	3.20	±No. 100A4/4—With Shank Fitted to Nos. 100/4, 100A4 and 100B4 Sockets	4.80
±No. 100A1/5—With Shank Fitted to Nos. 100/5, 100A5 and 100B5 Sockets	4.80	±No. 100A4/6—With Shank Fitted to Nos. 100/6, 100A6 and 100B6 Sockets	12.00
±No. 100A2/4—With Shank Fitted to Nos. 100/4, 100A4 and 100B4 Sockets	3.20	±No. 100A5/4—With Shank Fitted to Nos. 100/4, 100A4 and 100B4 Sockets	12.00
		±No. 100A5/5—With Shank Fitted to Nos. 100/5, 100A5 and 100B5 Sockets	12.00
		±No. 100A5/6—With Shank Fitted to Nos. 100/6, 100A6 and 100B6 Sockets	12.00

STEEL SLEEVES.



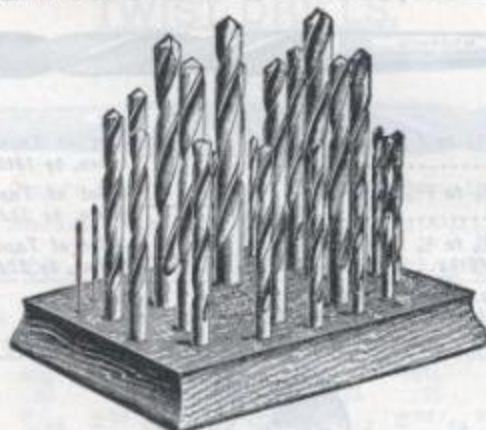
For Morse Taper Shank Drills.

Finest Tool Steel.

	Each		Each
No. 100B1/2—Fitted to Nos. 100/2, 100A2, and 100B2 Sockets; Weight each about $\frac{1}{2}$ lb.	\$1.80	No. 100B3/4—Fitted to Nos. 100/4, 100A4 and 100B4 Sockets; Weight each about 1 lb.	\$3.00
No. 100B2/3—Fitted to Nos. 100/3, 100A3 and 100B3 Sockets; Weight each about $\frac{1}{2}$ lb.	2.40	No. 100B4/5—Fitted to Nos. 100/5 Sockets; Weight each about $2\frac{1}{2}$ lbs.	4.40
±No. 100B1/3—Fitted to Nos. 100/3, 100A3 and 100B3 Sockets	2.40	±No. 100B2/5—Fitted to Nos. 100/5, 100A5 and 100B5 Sockets	4.40
±No. 100B1/4—Fitted to Nos. 100/4, 100A4 and 100B4 Sockets	3.00	±No. 100B3/5—Fitted to Nos. 100/5, 100A5 and 100B5 Sockets	4.40
±No. 100B1/5—Fitted to Nos. 100/5, 100A5 and 100B5 Sockets	4.40	±No. 100B4/6—Fitted to Nos. 100/6, 100A6 and 100B6 Sockets	10.00
±No. 100B2/4—Fitted to Nos. 100/4, 100A4 and 100B4 Sockets	3.00	±No. 100B5/6—Fitted to Nos. 100/6, 100A6 and 100B6 Sockets	10.00

Packed Loose.

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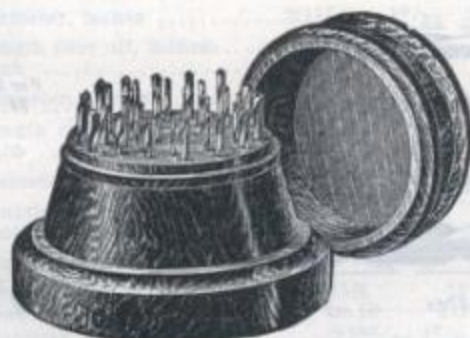
TWIST DRILLS IN SETS.

MORSE; In Sets, Mounted.

Polished Hardwood Block; Size of Drill each Hole contains Stamped on Block.

	Per Set		Per Set
Block 7 inches Long, 5 inches Wide, $1\frac{1}{16}$ inch Thick.		No. 8—HOLDS 60 STRAIGHT SHANK DRILLS,	
No. 5—HOLDS 29 STRAIGHT SHANK DRILLS,		No. 1 to 60; Complete with Drills; Block	
$\frac{1}{16}$ to $\frac{1}{2}$ inch by 64ths; Complete with		7 inches Long, $4\frac{1}{8}$ inches Wide, 1 inch Thick;	
Drills; Weight per Set about 3 lbs.....	\$10.00	Weight per Set about $1\frac{1}{2}$ lbs.....	\$8.10
No. 6—HOLDS 15 STRAIGHT SHANK DRILLS,		No. 9—HOLDS 30 STRAIGHT SHANK DRILLS,	
$\frac{1}{16}$ to $\frac{1}{2}$ by 32nds; Complete with Drills;		Alternate Nos. 1 to 59; Complete with Drills;	
Weight per Set about 2 lbs.....	5.40	Block $6\frac{1}{2}$ inches Long, $4\frac{1}{8}$ inches Wide, 1	
No. 7—HOLDS 65 STRAIGHT SHANK DRILLS,		inch Thick; Weight per Set about 1 lb.....	4.30
No. 60 to $\frac{3}{8}$ inch; Complete with Drills;		±No. 15—HOLDS 25 STRAIGHT SHANK DRILLS, from	
Weight per Set about 2 lbs.....	9.90	A to Z; Complete with Drills; Weight per	
		Set about $\frac{3}{4}$ lb.	10.00
		Each	
		Extra Blocks for Drill Sets; Weight each about 6 ozs..	\$0.35

One Set in a Cardboard Box.



Jewelers', in Case.

	Per Set
No. 10—MOUNTED in Genuine Polished Mahog-	
any Case with Cap; Size of Drills each Hole	
contains Stamped on Case; 36 Steel Wire	
Gauge Drills, Nos. 30 to 65; Height of Case	
over all $2\frac{1}{4}$ inches. Diameter at Base $3\frac{1}{4}$	
inches; Weight per Set about $\frac{3}{4}$ lb.....	\$4.25

One Set in a Wood Box.



	Per Set
No. 100M—MORSE BIT STOCK DRILLS, IN	
SETS, in Hardwood Cylindrical Boxes,	
one each, 2, 3, 4, 5, 6, 7, 8, 10, 12/32; Weight	
per Set about $1\frac{1}{2}$ lbs.....	\$2.75

WILL FIT ANY BRACE IN THE MARKET, and will Drill Steel, Iron or other Metals, as well as Wood.

±TWIST DRILLS IN SETS.



	Per Set
±No. 1—Set of Taper Shank Drills, $\frac{1}{8}$ to 1 inch, by 16ths	\$20.00
±No. 2—Set of Taper Shank Drills, $\frac{3}{8}$ to $1\frac{1}{4}$ inches, by 16ths	34.50
±No. 3—Set of Taper Shank Drills, $\frac{3}{8}$ to $\frac{3}{4}$ inch, by 32ds, $1\frac{1}{8}$ to $1\frac{1}{4}$ inches, by 16ths	42.00
±No. 4/1—Set of Taper Shank Drills, $\frac{3}{8}$ to $\frac{3}{4}$ inch, by 32ds, $1\frac{1}{8}$ to $1\frac{1}{2}$ inches, by 16ths	64.00

	Per Set
±No. 4/2—Set of Taper Shank Drills, $1\frac{1}{8}$ to 2 inches, by 16ths	\$67.00
±No. 11/1—Set of Taper Shank Drills, $\frac{3}{8}$ to $1\frac{1}{2}$ inches, by 32ds	109.85
±No. 11/2—Set of Taper Shank Drills, $1\frac{1}{8}$ to 2 inches, by 32ds	132.70



Sets in Hardwood Cylindrical Boxes, with Metal Top.

	Per Set
±No. 5AS—Set Drills, Straight Shanks, $\frac{1}{16}$ to $\frac{1}{2}$ inch by 64ths	\$11.60
±No. 6AS—Set Drills, Straight Shanks, $\frac{1}{16}$ to $\frac{1}{2}$ inch by 32ds	6.00
±No. 7AS—Set Drills from No. 60 to $\frac{3}{8}$ inch	11.40

	Per Set
±No. 8AS—Set Drills, Steel Wire Gauge, from No. 1 to 60	\$9.60
±No. 9AS—Half Set Drills, alternate numbers from No. 1 to 59	5.80



	Per Set
±No. 13AS—Set Bit Stock Drills, $\frac{1}{16}$ to $\frac{1}{4}$ inch by 32ds, $\frac{5}{16}$ to $\frac{3}{8}$ inch by 16ths	\$4.10

±MACHINE BITS IN SETS.



	Per Set
±No. 12—Set Straight Shank Machine Bits, $\frac{1}{8}$ to $\frac{1}{2}$ inch, Mounted by 32ds	\$7.00



Sets in Hardwood Cylindrical Boxes, with Metal Top.

	Per Set
±No. 12AS—Set Straight Shank Machine Bits, $\frac{1}{8}$ to $\frac{1}{2}$ inch by 32ds	\$9.50

Packed Loose.

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TWIST DRILLS.

Finest Tool Steel.



No. 102—Morse; Taper Shank; Patent Straight Lip; Increase Twist.

Fit Sockets Nos. 100/1, 100A1/2, 100B1/2.

Diameter, inches	$\frac{1}{16}$	$\frac{5}{64}$	$\frac{3}{32}$	$\frac{7}{64}$	$\frac{1}{8}$	$\frac{9}{64}$	$\frac{5}{32}$	$\frac{11}{64}$	$\frac{3}{16}$	$\frac{13}{64}$	$\frac{7}{32}$	$\frac{15}{64}$
Length over all, inches	4%	4%	4%	4%	5%	5%	5%	5%	5%	5%	6	6%
Each	\$0.35	.40	.40	.45	.45	.45	.45	.50	.50	.55	.55	.60
Diameter, inches	$\frac{1}{4}$	$\frac{17}{64}$	$\frac{9}{32}$	$\frac{19}{64}$	$\frac{5}{16}$	$\frac{21}{64}$	$\frac{11}{32}$	$\frac{23}{64}$	$\frac{3}{8}$	$\frac{25}{64}$	$\frac{13}{32}$	$\frac{27}{64}$
Length over all, inches	6%	6%	6%	6%	6%	6%	6%	6%	6%	7	7	7%
Each	\$0.60	.65	.65	.70	.70	.75	.75	.80	.80	.85	.85	.90
Diameter, inches	$\frac{7}{16}$	$\frac{29}{64}$	$\frac{15}{32}$	$\frac{31}{64}$	$\frac{1}{2}$	$\frac{33}{64}$	$\frac{17}{32}$	$\frac{35}{64}$	$\frac{9}{16}$	$\frac{37}{64}$	$\frac{19}{32}$	
Length over all, inches	7%	7%	7%	7%	7%	8	8	8%	8%	8%	8%	8%
Each	\$0.90	.95	.95	1.00	1.00	1.10	1.10	1.20	1.20	1.30	1.30	

Fit Sockets Nos. 100/2, 100A2/3, 100B2/3.

Diameter, inches	$\frac{39}{64}$	$\frac{5}{8}$	$\frac{41}{64}$	$\frac{21}{32}$	$\frac{43}{64}$	$\frac{11}{16}$	$\frac{45}{64}$	$\frac{23}{32}$	$\frac{47}{64}$	$\frac{3}{4}$	
Length over all, inches	8%	8%	9	9	9%	9%	9%	9%	9%	9%	9%
Each	\$1.40	1.40	1.50	1.50	1.60	1.60	1.70	1.70	1.85	1.85	
Diameter, inches	$\frac{49}{64}$	$\frac{25}{32}$	$\frac{51}{64}$	$\frac{13}{16}$	$\frac{53}{64}$	$\frac{27}{32}$	$\frac{55}{64}$	$\frac{7}{8}$	$\frac{57}{64}$	$\frac{29}{32}$	
Length over all, inches	9%	9%	10	10	10%	10%	10%	10%	10%	10%	10%
Each	\$2.00	2.00	2.15	2.15	2.30	2.30	2.45	2.45	2.60	2.60	

Fit Sockets Nos. 100/3, 100A3/4, 100B3/4.

Diameter, inches	$\frac{59}{64}$	$\frac{15}{16}$	$\frac{61}{64}$	$\frac{31}{32}$	$\frac{63}{64}$	$\frac{1}{2}$	$\frac{11}{16}$	$\frac{11}{32}$	$\frac{13}{16}$	$\frac{11}{16}$	$\frac{15}{16}$
Length over all, in.	10%	10%	10%	10%	11	11	11%	11%	11%	11%	11%
Each	\$2.75	2.75	2.90	2.90	3.00	3.00	3.20	3.20	3.40	3.40	3.60
Diameter, inches	$\frac{13}{32}$	$\frac{17}{64}$	$\frac{11}{8}$	$\frac{19}{64}$	$\frac{15}{32}$	$\frac{111}{64}$	$\frac{13}{16}$	$\frac{113}{64}$	$\frac{17}{32}$	$\frac{115}{64}$	$\frac{11}{4}$
Length over all, inches	11%	11%	11%	11%	11%	12	12	12%	12%	12%	12%
Each	\$3.60	3.80	3.80	4.00	4.00	4.20	4.20	4.40	4.40	4.50	4.50

Fit Sockets Nos. 100/4, 100A4/5, 100B4/5.

Diameter, inches	$\frac{117}{64}$	$\frac{19}{32}$	$\frac{119}{64}$	$\frac{15}{16}$	$\frac{121}{64}$	$\frac{111}{32}$	$\frac{123}{64}$	$\frac{13}{8}$	$\frac{125}{64}$	$\frac{113}{32}$	
Length over all, inches	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%	14%
Each	\$4.65	4.65	4.80	4.80	5.00	5.00	5.20	5.20	5.40	5.40	
Diameter, inches	$\frac{127}{64}$	$\frac{17}{16}$	$\frac{129}{64}$	$\frac{115}{32}$	$\frac{131}{64}$	$\frac{11}{2}$	$\frac{133}{64}$	$\frac{17}{8}$	$\frac{135}{64}$	$\frac{117}{32}$	$\frac{137}{64}$
Length over all, inches	14%	14%	14%	14%	14%	15	15	15	15	15%	15%
Each	\$5.60	5.60	5.80	5.80	6.00	6.00	6.30	6.30	6.60	6.60	
Diameter, inches	$\frac{19}{16}$	$\frac{137}{64}$	$\frac{119}{32}$	$\frac{139}{64}$	$\frac{15}{8}$	$\frac{141}{64}$	$\frac{121}{32}$	$\frac{143}{64}$	$\frac{111}{16}$	$\frac{145}{64}$	
Length over all, inches	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Each	\$6.60	6.90	6.90	7.20	7.20	7.50	7.50	7.80	7.80	8.10	
Diameter, inches	$\frac{123}{32}$	$\frac{147}{64}$	$\frac{13}{4}$	$\frac{149}{64}$	$\frac{125}{32}$	$\frac{151}{64}$	$\frac{113}{16}$	$\frac{153}{64}$	$\frac{111}{8}$	$\frac{127}{32}$	
Length over all, inches	15%	16	16	16	16	16%	16%	16%	16%	16%	16%
Each	\$8.10	8.40	8.40	8.60	8.60	8.80	8.80	9.00	9.00	9.00	
Diameter, inches	$\frac{155}{64}$	$\frac{17}{8}$	$\frac{157}{64}$	$\frac{129}{32}$	$\frac{159}{64}$	$\frac{115}{16}$	$\frac{161}{64}$	$\frac{131}{32}$	$\frac{163}{64}$	$\frac{127}{16}$	$\frac{165}{64}$
Length over all, inches	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%	16%
Each	\$9.20	9.20	9.35	9.35	9.50	9.50	9.65	9.65	9.80	9.80	

Weight Each about: $\frac{3}{16}$ inch, 2 ozs.; $\frac{13}{32}$ inch, $\frac{1}{4}$ lb.; $\frac{43}{64}$ inch, $\frac{3}{4}$ lb.; $\frac{15}{16}$ inch, 1 $\frac{1}{2}$ lbs.; $\frac{1}{4}$ inch, 2 $\frac{1}{2}$ lbs.; $\frac{1}{2}$ inch, 4 lbs.; $\frac{13}{32}$ inch, 5 lbs.; 2 inch, 7 lbs.

Packed Loose.

TWIST DRILLS.

Finest Tool Steel.



Turned from Tool Steel; Tempered and Polished.

No. 105—MORSE; Straight Shank; Patent Straight Lip; Increase Twist.

Diameter, inches	$\frac{1}{32}$	$\frac{3}{32}$	$\frac{1}{16}$	$\frac{5}{64}$	$\frac{3}{32}$	$\frac{7}{64}$	$\frac{1}{8}$	$\frac{9}{64}$	$\frac{5}{32}$	$\frac{11}{64}$	$\frac{3}{16}$
Length over all, inches	$\frac{17}{16}$	$\frac{11}{16}$	$2\frac{1}{2}$	$2\frac{5}{8}$	$2\frac{3}{4}$	$2\frac{7}{8}$	3	$3\frac{1}{8}$	$3\frac{1}{4}$	$3\frac{3}{8}$	$3\frac{1}{2}$
Per dozen	\$0.90	1.00	1.00	1.10	1.20	1.30	1.45	1.60	1.80	2.00	2.20
Diameter, inches	$\frac{13}{64}$	$\frac{7}{32}$	$\frac{15}{64}$	$\frac{1}{4}$	$\frac{17}{64}$	$\frac{9}{32}$	$\frac{10}{64}$	$\frac{5}{16}$	$\frac{21}{64}$	$\frac{11}{32}$	
Length over all, inches	$3\frac{3}{4}$	$3\frac{3}{4}$	$3\frac{3}{4}$	4	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$	$4\frac{3}{4}$	$4\frac{3}{4}$
Per dozen	\$2.40	2.65	2.90	3.15	3.40	3.65	3.90	4.20	4.50	4.80	
Diameter, inches	$\frac{23}{64}$	$\frac{3}{8}$	$\frac{25}{64}$	$\frac{13}{32}$	$\frac{27}{64}$	$\frac{7}{16}$	$\frac{29}{64}$	$\frac{15}{32}$	$\frac{31}{64}$	$\frac{1}{2}$	
Length over all, inches	$4\frac{1}{4}$	5	$5\frac{1}{4}$	$5\frac{1}{4}$	$5\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{1}{2}$	$5\frac{3}{4}$	$5\frac{3}{4}$	6	
Per dozen	\$5.10	5.40	5.70	6.00	6.40	6.80	7.20	7.50	7.75	8.00	

Weight per Dozen about, $\frac{1}{16}$ inch, 1 oz.; $\frac{1}{8}$ inch, $\frac{1}{2}$ lb.; $\frac{3}{16}$ inch, $1\frac{1}{4}$ lbs.; $\frac{1}{4}$ inch, 2 $\frac{1}{2}$ lbs.; Packed Loose.**±No. 105A—MORSE; Straight Shank Drills, with Increase Twist or Constant Angle.**

Millimeter Sizes.

Diameter, M. M.	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5
Diameter in Decimals of 1 inch	.0393	.0590	.0787	.0984	.1181	.1378	.1575	.1771	.1968
Twist Cut, M. M.	17	21	29	34	43	46	51	56	62
Length over all, M. M.	39	46	53	60	70	73	79	86	93
Each	\$0.08	.09	.09	.12	.14	.15	.17	.19	.21
Diameter, M. M.	$5\frac{1}{2}$	6	$6\frac{1}{2}$	7	$7\frac{1}{2}$	8	$8\frac{1}{2}$	9	
Diameter in Decimals of 1 inch	.2165	.2362	.2559	.2756	.2953	.3149	.3346	.3543	
Twist Cut, M. M.	67	70	73	76	79	81	84	89	
Length over all, M. M.	100	102	105	108	111	114	117	124	
Each	\$0.22	.26	.26	.32	.35	.37	.42	.45	
Diameter, M. M.	$9\frac{1}{2}$	10	$10\frac{1}{2}$	11	$11\frac{1}{2}$	12	$12\frac{1}{2}$	13	
Diameter in Decimals of 1 inch	.3740	.3937	.4134	.4330	.4527	.4724	.4921	.5118	
Twist Cut, M. M.	93	95	98	104	106	109	112	114	
Length over all, M. M.	127	130	133	140	143	146	149	152	
Each	\$0.48	.50	.58	.59	.63	.65	.70	.85	

**±No. 106—Straight Shank Drills, with Increase or Constant Angle.**

Size by Gauge	A	B	C	D	E	F	G	H	I	J	K	L	M
Decimal Equivalent	.234	.238	.242	.246	.250	.257	.261	.266	.272	.277	.281	.290	.295
Twist Cut, inches	$2\frac{1}{8}/32$	$2\frac{1}{8}/32$	$2\frac{1}{8}/32$	$2\frac{1}{8}/32$	$2\frac{1}{8}/32$	3	3	3	3	3	3	$2\frac{1}{8}/32$	$2\frac{1}{8}/32$
Length over all, in	$3\frac{1}{2}/16$	$3\frac{1}{2}/16$	$3\frac{1}{2}/16$	$3\frac{1}{2}/16$	$3\frac{1}{2}/16$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$
Each	\$0.26	.27	.28	.29	.30	.30	.31	.32	.33	.34	.35	.36	.36
Size by Gauge	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Decimal Equivalent	.302	.316	.323	.332	.339	.348	.358	.368	.377	.386	.397	.404	.413
Twist Cut, inches	$2\frac{1}{8}/32$	$2\frac{1}{8}/32$	$3\frac{1}{8}/16$	$3\frac{1}{8}/16$	$3\frac{1}{8}/16$	$3\frac{1}{8}/32$	$3\frac{1}{8}/32$	$3\frac{1}{8}/32$	$3\frac{1}{8}/32$	$3\frac{1}{8}/32$	$3\frac{1}{8}/32$	$3\frac{1}{8}/32$	$3\frac{1}{8}/32$
Length over all, in	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$4\frac{1}{4}$	5	$5\frac{1}{8}$	$5\frac{1}{8}$	$5\frac{1}{8}$	$5\frac{1}{8}$
Each	\$0.37	.38	.39	.40	.42	.44	.45	.47	.49	.51	.53	.55	.59

Packed Loose.



TWIST DRILLS.



No. 107—Morse; Twist, Straight Shank, Wire Drills, Finest Tool Steel.

Size Wire Gauge.

Nos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Length over all, in.	4	3 ¹⁵ / ₁₆	3 ¹³ / ₁₆	3 ¹¹ / ₁₆	3 ⁹ / ₁₆	3 ⁷ / ₁₆	3 ⁵ / ₁₆	3 ³ / ₁₆	3 ¹ / ₁₆	2 ¹⁵ / ₁₆	2 ¹³ / ₁₆	2 ¹¹ / ₁₆	2 ⁹ / ₁₆	2 ⁷ / ₁₆	2 ⁵ / ₁₆	2 ³ / ₁₆
Per dozen	\$2.35	2.35	2.35	2.35	2.35	2.25	2.25	2.25	2.25	2.25	2.10	2.10	2.10	2.10	2.10	1.95
Nos.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Length over all, in.	3 ⁵ / ₁₆	3 ³ / ₁₆	3 ¹ / ₁₆	2 ¹⁵ / ₁₆	2 ¹³ / ₁₆	2 ¹¹ / ₁₆	2 ⁹ / ₁₆	2 ⁷ / ₁₆	2 ⁵ / ₁₆	2 ³ / ₁₆	2 ¹ / ₁₆	1 ¹⁵ / ₁₆	1 ¹³ / ₁₆	1 ¹¹ / ₁₆	1 ⁹ / ₁₆	1 ⁷ / ₁₆
Per dozen	\$1.95	1.95	1.95	1.95	1.75	1.75	1.75	1.75	1.75	1.55	1.55	1.55	1.55	1.55	1.40	1.40
Nos.	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
Length over all, in.	2 ¹¹ / ₁₆	2 ⁹ / ₁₆	2 ⁷ / ₁₆	2 ⁵ / ₁₆	2 ³ / ₁₆	2 ¹ / ₁₆	1 ¹⁵ / ₁₆	1 ¹³ / ₁₆	1 ¹¹ / ₁₆	1 ⁹ / ₁₆	1 ⁷ / ₁₆	1 ⁵ / ₁₆	1 ³ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆
Per dozen	\$1.40	1.40	1.40	1.25	1.25	1.25	1.25	1.25	1.10	1.10	1.10	1.10	1.10	.95	.95	.95
Nos.	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
Length over all, in.	2	1 ¹⁵ / ₁₆	1 ¹³ / ₁₆	1 ¹¹ / ₁₆	1 ⁹ / ₁₆	1 ⁷ / ₁₆	1 ⁵ / ₁₆	1 ³ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆	1 ¹ / ₁₆
Per dozen	\$0.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95	.90	.90	.90
Nos.	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Length over all, inches	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂
Per dozen	\$0.90	.90	.90	.90	.90	.90	.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Weight per Dozen about, No. 1, 6 ozs.; No. 10, 5 ozs.; No. 20, 4 ozs.; No. 30, 2 ozs.; No. 40, 2 ozs.; No. 50, 1 oz.

***MACHINE BITS.**

Finest Tool Steel.



±No. 108—Morse Straight Shank and Patent Straight Lip; Increase Twist; For Wood.

Diameter, inches	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32
Length over all, inches	3	3 ¹ / ₄	3 ¹ / ₂	3 ³ / ₄	4	4 ¹ / ₄	4 ¹ / ₂	4 ³ / ₄	5	5 ¹ / ₄	5 ¹ / ₂	5 ³ / ₄
Each	\$0.20	.25	.30	.35	.40	.45	.50	.55	.65	.70	.75	.80
Diameter, inches	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
Length over all, inches	6	6 ¹ / ₄	6 ¹ / ₂	6 ³ / ₄	7	7 ¹ / ₄	7 ¹ / ₂	7 ³ / ₄	8	8 ¹ / ₄	8 ¹ / ₂	8 ³ / ₄
Each	\$0.85	.95	1.00	1.10	1.15	1.25	1.35	1.50	1.65	1.80	2.00	2.25
Diameter, inches	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2
Length over all, inches	9 ¹ / ₄	9 ¹ / ₂	9 ³ / ₄	10	10 ¹ / ₄	10 ¹ / ₂	10 ³ / ₄	11	11 ¹ / ₄	11 ¹ / ₂	11 ³ / ₄	12
Each	\$2.35	3.00	3.60	4.00	4.40	4.80	5.20	5.60	6.00	6.40	6.80	7.20



±No. 108A—MORSE; Taper Lengths Fitting Prentice Blacksmith's Drill Press Nos. 1 and 2; Straight Shanks 1/2 inch

Diameter and 1/2 inches Long.

Diameter, inches	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2
Length over all, inches	4 ³ / ₈	4 ⁷ / ₈	5	5 ¹ / ₄	5 ¹ / ₂	5 ³ / ₄	6	6 ¹ / ₄	6 ¹ / ₂	6 ³ / ₄	7	7 ¹ / ₄	7 ¹ / ₂
Twist Cut, inches	1 ¹ / ₁₆	2 ¹ / ₁₆	2 ⁵ / ₁₆	2 ⁹ / ₁₆	3	3 ¹ / ₁₆	3 ⁵ / ₁₆	3 ⁹ / ₁₆	3 ¹³ / ₁₆	4	4 ¹ / ₁₆	4 ⁵ / ₁₆	4 ⁹ / ₁₆
Each	\$0.50	.60	.60	.70	.75	.80	.85	.90	.95	1.00	1.10	1.20	1.30
Diameter, inches	1 1/2	1 5/8	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4
Length over all, inches	8	8 ¹ / ₄	8 ¹ / ₂	8 ³ / ₄	9	9 ¹ / ₄	9 ¹ / ₂	9 ³ / ₄	10	10 ¹ / ₄	10 ¹ / ₂	10 ³ / ₄	10 ³ / ₄
Twist Cut, inches	4 ³ / ₈	5	5 ¹ / ₄	5 ¹ / ₂	5 ³ / ₄	6	6 ¹ / ₄	6 ¹ / ₂	6 ³ / ₄	7	7 ¹ / ₄	7 ¹ / ₂	7 ¹ / ₂
Each	\$1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.20	2.40	2.60	2.80	3.00
Diameter, inches	4 1/2	5	5 1/4	5 1/2	5 3/4	6	6 1/4	6 1/2	6 3/4	7	7 1/4	7 1/2	7 3/4
Length over all, inches	10 ⁵ / ₈	10 ³ / ₄	10 ⁷ / ₈	11	11 ¹ / ₄	11 ¹ / ₂	12	12 ¹ / ₂	12 ¹ / ₂	12 ¹ / ₂	12 ¹ / ₂	12 ¹ / ₂	12 ¹ / ₂
Twist Cut, inches	7 ³ / ₈	7 ¹ / ₂	7 ⁵ / ₈	7 ³ / ₄	7 ⁷ / ₈	8	8 ¹ / ₄	8 ¹ / ₂	8 ³ / ₄	8 ¹ / ₂	8 ¹ / ₂	8 ¹ / ₂	8 ¹ / ₂
Each	\$2.80	3.00	3.20	3.40	3.70	4.00	4.30	4.60	5.05	5.60	5.95	6.40	6.80

Packed Loose.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

TWIST DRILLS.

KEEN KUTTER®



Bit Stock, for Metal or Wood.

No. K109—Forged from Highest Grade Crucible Steel, Oil Tempered and Full Polished.

Diameter, inches	2/32	3/32	4/32	5/32	6/32	7/32	8/32	9/32	10/32	11/32
Length, inches	3 1/4	3 1/2	4	4 1/4	4 3/4	5	5 1/4	5 1/2	5 3/4	6
Per dozen	\$1.50	1.65	2.10	2.60	3.10	3.60	4.10	4.70	5.40	6.30
Diameter, inches	12/32	13/32	14/32	15/32	16/32	17/32	18/32	20/32	22/32	24/32
Length, inches	6	6 1/2	6 3/4	7	7	7 1/2	7 1/2	7 3/4	7 1/2	7 1/2
Per dozen	\$7.20	8.00	8.80	9.60	10.30	11.00	14.40	16.20	18.00	19.80

Weight per Dozen about, lbs., 2/32, 3/4 lb.; 10/32, 1 1/4 lbs.; 16/32, 2 3/4 lbs.; 24/32, 6 lbs.

2/32 to 16/32, One Dozen in a Wood Box; 17/32 and Larger, Packed Loose.

No. K109/S—IN SETS, One each, 2, 3, 4, 5, 6, 7, 8, 10, 12/32; Weight per Set about 3/4 lb. Per Set \$2.60

One Set in a Wood Box.



No. K109M—BIT STOCK DRILLS, IN SETS, in Varnished Hardwood Cylindrical Boxes, one each, 2, 3, 4, 5, 6, 7, 8, 10, 12/32; Weight per Set about 1 1/4 lbs. Per Set \$2.75

One Set in a Wood Box.

WILL FIT ANY BRACE IN THE MARKET, AND WILL DRILL STEEL, IRON OR OTHER METALS, AS WELL AS WOOD.

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*MACHINE BITS.



No. 108B—With Morse Taper Shank.

Fits Sockets Nos. 100/1, 100A1/2 and 100B1/2.

Diameter, inches	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2
Length over all, inches	4 5/8	4 7/8	5	5 1/4	6 1/8	6 3/4	7 1/8	8 1/4	9 1/4
Twist Cut, inches	1 1/2	2 1/2	2 5/8	2 7/8	3	3 1/8	3 1/2	3 3/4	4 1/4
Each	\$0.50	.50	.60	.60	.70	.75	.80	.85	.95
Diameter, inches	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
Length over all, inches	6 3/4	7	7 1/4	7 1/2	7 3/4	8	8 1/4	8 1/2	8 3/4
Twist Cut, inches	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2
Each	\$0.90	.95	1.00	1.10	1.20	1.30	1.40	1.50	1.60

Fits Sockets Nos. 100/2, 100A2/3 and 100B2/3.

Diameter, inches	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2
Length over all, inches	8 3/4	9	9 1/4	9 1/2	9 3/4	10	10 1/4	10 1/2	10 3/4
Twist Cut, inches	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
Each	\$1.60	1.70	1.80	1.90	2.00	2.30	2.30	2.60	3.00

Fits Sockets Nos. 100/3, 100A3/4 and 100B3/4.

Diameter, inches	1 1/8	1 1/2	1 3/4	2	2 1/8	2 1/4	2 1/2	2 3/4	3
Length over all, inches	10 3/4	10 7/8	11	11 1/4	11 1/2	11 3/4	12	12 1/4	12 1/2
Twist Cut, inches	6 1/4	6 3/4	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Each	\$3.00	3.40	3.40	4.10	4.10	4.80	4.80	4.80	4.80

Fits Sockets Nos. 100/4, 100A4/5 and 100B4/5.

Diameter, inches	1 5/8	2	2 1/4	2 1/2	2 3/4	3
Length over all, inches	14 1/4	14 1/2	14 3/4	15	15 1/4	15 1/2
Twist Cut, inches	8 3/4	9	9 1/4	9 1/2	9 3/4	9 3/4
Each	\$5.60	5.60	6.40	6.40	6.40	6.40

TWIST DRILLS.



No. 109—Morse's Bit Stock, for Metal or Wood.

Diameter, inches	2/32	3/32	4/32	5/32	6/32	7/32	8/32	9/32	10/32	11/32	12/32	13/32
Length over all, inches	3 1/4	3 1/2	4	4 1/4	4 1/2	5	5 1/4	5 1/2	5 3/4	6	6 1/2	6 3/4
Per dozen	\$1.50	1.65	2.10	2.60	3.10	3.60	4.10	4.70	5.40	6.30	7.20	8.00
Diameter, inches	14/32	15/32	16/32	17/32	18/32	19/32	20/32	22/32	24/32	26/32	28/32	30/32
Length over all, inches	6 1/2	7	7 1/4	7 1/2	7 3/4	8	8 1/4	8 1/2	8 3/4	9	9 1/4	9 1/2
Per dozen	\$8.80	9.60	10.30	11.00	11.40	11.60	11.80	12.00	12.20	12.40	12.60	12.80

Per Set

No. 109/8—IN SETS; one each, 2, 3, 4, 5, 6, 7, 8, 10, 12/32; Weight per set about 1 lb.; One set in a Wood Box \$2.60



No. 109E/1—Morse's Taper Square Shank Drills.

Diameter, inches	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2
Length over all, inches	4 1/8	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2	5 3/4	6
Each	\$0.90	.95	.95	1.00	1.00	1.05	1.10	1.15	1.20
Diameter, inches	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2
Length over all, inches	6 1/2	6 3/4	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
Each	\$1.25	1.30	1.30	1.35	1.35	1.40	1.40	1.45	1.50
Diameter, inches	2 1/8	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4
Length over all, inches	8 1/2	8 3/4	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2
Each	\$1.55	1.65	1.75	1.90	2.05	2.20	2.30	2.40	2.55
Diameter, inches	4 1/2	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2	5 3/4	6
Length over all, inches	10 1/2	10 3/4	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2	10 1/2
Each	\$2.70	2.85	3.10	3.35	3.65	3.90	4.20	4.50	4.80

Packed Loose.

For Boring all kinds of Metal. Shank Fits any Ratchet Drill. Shanks 1/2 inch by 1/2 inch and 1 1/2 inches Long.

TWIST DRILLS.

No. 112/2—Morse; Straight Shanks $2\frac{1}{2}$ inches Long and $\frac{1}{4}$ inch in Diameter.

Diameter, inches	$\frac{1}{8}$	$\pm\frac{9}{64}$	$\frac{5}{32}$	$\pm\frac{11}{64}$	$\frac{3}{16}$	$\pm\frac{13}{64}$	$\frac{7}{32}$	$\pm\frac{15}{64}$	$\frac{1}{4}$
Length over all, inches	$5\frac{1}{4}$	$5\frac{1}{4}$	$5\frac{1}{4}$	$5\frac{1}{4}$	$5\frac{1}{4}$	$5\frac{1}{4}$	6	6	6
Each	\$0.45	.45	.45	.50	.50	.55	.55	.60	.60
Diameter, inches	$\pm\frac{17}{64}$	$\frac{9}{32}$	$\pm\frac{19}{64}$	$\frac{5}{16}$	$\pm\frac{21}{64}$	$\frac{11}{32}$	$\pm\frac{23}{64}$	$\frac{3}{8}$	$\pm\frac{25}{64}$
Length over all, inches	6	6	6	6	6	6	6	6	6
Each	\$0.65	.65	.70	.70	.73	.73	.75	.75	.78
Diameter, inches	$\frac{13}{32}$	$\pm\frac{27}{64}$	$\frac{7}{16}$	$\pm\frac{29}{64}$	$\frac{15}{32}$	$\pm\frac{31}{64}$	$\frac{1}{2}$	$\pm\frac{33}{64}$	$\frac{17}{32}$
Length over all, inches	6	6	6	6	6	6	6	6	6
Each	\$0.78	.80	.80	.83	.83	.85	.85	.88	.88
Diameter, inches	$\pm\frac{35}{64}$	$\frac{9}{16}$	$\pm\frac{37}{64}$	$\frac{19}{32}$	$\pm\frac{39}{64}$	$\frac{5}{8}$	$\pm\frac{41}{64}$	$\frac{21}{32}$	$\pm\frac{43}{64}$
Length over all, inches	6	6	6	6	6	6	6	6	6
Each	\$0.90	.90	1.00	1.00	1.05	1.05	1.10	1.10	1.15
Diameter, inches	$\frac{11}{16}$	$\pm\frac{45}{64}$	$\frac{23}{32}$	$\pm\frac{47}{64}$	$\frac{3}{4}$	$\pm\frac{49}{64}$	$\frac{25}{32}$	$\pm\frac{51}{64}$	$\frac{13}{16}$
Length over all, inches	6	6	6	6	6	6	6	6	6
Each	\$1.15	1.20	1.20	1.25	1.25	1.30	1.30	1.35	1.35
Diameter, inches	$\pm\frac{53}{64}$	$\frac{27}{32}$	$\pm\frac{55}{64}$	$\frac{7}{8}$	$\pm\frac{57}{64}$	$\frac{29}{32}$	$\pm\frac{59}{64}$	$\frac{15}{16}$	$\pm\frac{61}{64}$
Length over all, inches	6	6	6	6	6	6	6	6	6
Each	\$1.40	1.40	1.45	1.45	1.55	1.55	1.60	1.60	1.70
Diameter, inches	$\frac{31}{32}$	$\pm\frac{63}{64}$	1	$\pm\frac{11}{32}$	$\frac{11}{16}$	$\pm\frac{13}{32}$	$\frac{11}{8}$	$\pm\frac{15}{32}$	$\pm\frac{13}{16}$
Length over all, inches	6	6	6	6	6	6	6	6	6
Each	\$1.70	1.80	1.80	1.90	2.00	2.10	2.20	2.25	2.30
Diameter, inches	$\pm\frac{17}{32}$	$\pm\frac{11}{4}$	$\pm\frac{19}{32}$	$\pm\frac{15}{16}$	$\pm\frac{111}{32}$	$\pm\frac{13}{8}$	$\pm\frac{113}{32}$	$\pm\frac{17}{16}$	$\pm\frac{115}{32}$
Length over all, inches	6	6	6	6	6	6	6	6	6
Each	\$2.35	2.40	2.50	2.60	2.70	2.80	2.90	3.00	3.10

STRAIGHTWAY DRILLS.



No. 114A—MORSE; Straight Shank, Straightway Drills.

Diameter, inches	$\frac{1}{16}$	$\frac{5}{64}$	$\frac{3}{32}$	$\frac{7}{64}$	$\frac{1}{8}$	$\frac{9}{64}$	$\frac{5}{32}$	$\frac{11}{64}$	$\frac{3}{16}$	$\frac{13}{64}$
Length over all, inches	$2\frac{1}{2}$	$2\frac{3}{8}$	$2\frac{3}{4}$	$2\frac{7}{8}$	3	$3\frac{1}{8}$	$3\frac{1}{4}$	$3\frac{3}{8}$	$3\frac{1}{2}$	$3\frac{5}{8}$
Each	\$0.09	.10	.11	.12	.13	.15	.16	.18	.20	.21
Diameter, inches	$\frac{7}{32}$	$\frac{15}{64}$	$\frac{1}{4}$	$\frac{17}{64}$	$\frac{9}{32}$	$\frac{19}{64}$	$\frac{5}{16}$	$\frac{21}{64}$	$\frac{11}{32}$	$\frac{23}{64}$
Length over all, inches	$3\frac{3}{4}$	$3\frac{7}{8}$	4	$4\frac{1}{8}$	$4\frac{1}{4}$	$4\frac{3}{8}$	$4\frac{1}{2}$	$4\frac{5}{8}$	$4\frac{3}{4}$	$4\frac{7}{8}$
Each	\$0.23	.26	.28	.30	.32	.35	.37	.40	.42	.45
Diameter, inches	$\frac{3}{8}$	$\frac{25}{64}$	$\frac{13}{32}$	$\frac{27}{64}$	$\frac{7}{16}$	$\frac{29}{64}$	$\frac{15}{32}$	$\frac{31}{64}$	$\frac{1}{2}$	
Length over all, inches	5	$5\frac{1}{8}$	$5\frac{1}{4}$	$5\frac{3}{8}$	$5\frac{1}{2}$	$5\frac{5}{8}$	$5\frac{3}{4}$	$5\frac{7}{8}$	6	
Each	\$0.48	.50	.53	.55	.59	.63	.66	.67	.70	

Weight Each, all Numbers, about: $\frac{1}{16}$ inch, $3\frac{3}{8}$ OZS.; $\frac{5}{64}$, 4 OZS.; $\frac{3}{32}$, $4\frac{1}{2}$ OZS.; $\frac{7}{64}$, $5\frac{1}{4}$ OZS.; $\frac{1}{8}$, $6\frac{1}{2}$ OZS.; $\frac{9}{64}$, 8 OZS.; $\frac{5}{32}$, $9\frac{1}{2}$ OZS.; $\frac{11}{64}$, 11 OZS.; $\frac{3}{16}$, 1 lb.; $\frac{13}{64}$, $1\frac{1}{2}$ lbs.

Packed Loose.

-460-

REAMERS.

Finest Tool Steel.

Morse Taper Finishing Reamers, with Straight Shank.
Used for making Sockets.

	Each
†No. 118/0—Length over all, 3 3/4 inches; Length of Flutes 2 1/4 inches; Taper .367 x .252.....	\$1.60
No. 118/1—Length over all, 5 1/2 inches; Length of Flutes 3 inches; Taper .517 x .369.....	2.00
No. 118/2—Length over all, 7 inches; Length of Flutes 3 1/2 inches; Taper .745 x .573.....	2.60
No. 118/3—Length over all, 8 inches; Length of Flutes 4 1/4 inches; Taper .989 x .778.....	3.40
No. 118/4—Length over all, 9 inches; Length of Flutes 5 1/4 inches; Taper 1.290 x 1.020.....	4.20
No. 118/5—Length over all, 10 inches; Length of Flutes 6 1/4 inches; Taper 1.801 x 1.475.....	6.60
†No. 118/6—Length over all, 12 inches; Length of Flutes 8 1/2 inches; Taper 2.557 x 2.116.....	12.00

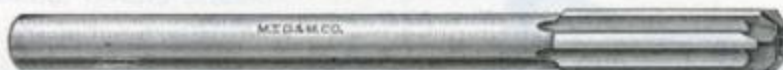
Weight Each, No. 118/1, 1/4 lb.; No. 118/3, 1 lb.; No. 118/5, 2 lbs.



Morse Taper Roughing Reamers, with Straight Shanks; Used for Making Sockets.

	Each
†No. 118 1/2/0—Length over all, 3 3/4 inches; Length of Flutes 2 1/4 inches; Taper .367 by .252.....	\$1.60
†No. 118 1/2/1—Length over all, 5 1/2 inches; Length of Flutes 3 inches; Taper .517 by .369.....	2.00
†No. 118 1/2/2—Length over all, 7 inches; Length of Flutes 3 1/2 inches; Taper .745 by .572.....	2.60
†No. 118 1/2/3—Length over all, 8 inches; Length of Flutes 4 1/4 inches; Taper .989 by .778.....	3.40
†No. 118 1/2/4—Length over all, 9 inches; Length of Flutes 5 1/4 inches; Taper 1.290 by 1.020.....	4.20
†No. 118 1/2/5—Length over all, 10 inches; Length of Flutes 6 1/4 inches; Taper 1.801 by 1.475.....	6.60
†No. 118 1/2/6—Length over all, 12 inches; Length of Flutes 8 1/2 inches; Taper 2.557 by 2.116.....	12.00

Weight Each about, No. 118 1/2/0, 1/4 lb.; No. 118 1/2/3, 1 lb.; No. 118 1/2/5, 2 lbs.



†No. 120—Morse Rose Chucking Reamers, with Straight Shank.

Diameter, inches	1/8	9/32	5/16	11/32	3/8	7/16	1/2	5/8	3/4	7/8	1
Length over all, inches	6	8	6	7	7	7	7	8	8	8	8
Length of Flute, inches	1 1/2	1 1/2	1 1/2	1 1/2	1 3/4	1 3/4	1 3/4	2	2	2	2
Each	\$0.80	.85	.90	.95	1.00	1.05	1.10	1.15	1.20	1.25	1.30
Diameter, inches	1 1/8	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2
Length over all, inches	9	9	9	9	9	9 1/2	9 1/2	9 1/2	9 1/2	10	10
Length of Flute, inches	2	2 1/4	2 1/4	2 1/4	2 1/4	2 1/2	2 1/2	2 1/2	2 1/2	2 5/8	2 5/8
Each	\$1.35	1.40	1.45	1.50	1.55	1.60	1.65	1.70	1.75	1.80	1.90
Diameter, inches	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2	5 3/4	6	6 1/4
Length over all, inches	10	10	10 1/2	10 1/2	10 1/2	10 1/2	11	11	11	11	11 1/2
Length of Flute, inches	2 5/8	2 5/8	2 5/8	2 5/8	2 5/8	2 5/8	2 7/8	2 7/8	2 7/8	2 7/8	3
Each	\$1.95	2.05	2.10	2.20	2.25	2.35	2.40	2.50	2.55	2.65	2.70
Diameter, inches	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2	10	10 1/2	11	11 1/2
Length over all, inches	11 1/2	12	12	12 1/2	12 1/2	13	13	13 1/2	13 1/2	14	14
Length of Flute, inches	3	3 1/4	3 1/4	3 1/2	3 1/2	3 3/4	3 3/4	4	4	4 1/4	4 1/4
Each	\$2.85	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.40
Diameter, inches	12 1/2	13	13 1/2	14	14 1/2	15	15 1/2	16	16 1/2	17	17 1/2
Length over all, inches	14 1/2	14 1/2	14 1/2	14 1/2	14 1/2	15	15	15	15	15	15
Length of Flutes, inches	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 3/4	4 3/4	4 3/4	4 3/4	4 3/4	4 3/4
Each	\$4.90	5.20	5.50	5.80	6.10	6.40	6.70	7.00	7.30	7.60	7.90
Diameter, inches	18	19	20	21	22	23	24	25	26	27	28
Length over all, inches	15 1/2	15 1/2	15 1/2	15 1/2	15 1/2	16	16	16	16	16	16
Length of Flutes, inches	5	5	5	5	5	5 1/4	5 1/4	5 1/4	5 1/4	5 1/4	5 1/4
Each	\$7.50	7.80	8.10	8.40	8.70	9.00	9.30	9.60	9.90	10.20	10.50

Weight Each about, 1/4 inch, 1 oz.; 3/8, 2 1/2 oz.; 1/2, 6 oz.; 3/4, 13 1/2 oz.; 1, 1 1/4 lbs.; 1 1/4, 3 1/4 lbs.; 1 1/2, 4 lbs.; 1 3/4, 5 1/4 lbs.; 2, 6 1/4 lbs.; 2 1/4, 8 lbs.; 3, 12 lbs.

Packed Loose.

***REAMERS.**

Finest Tool Steel.

**No. 120A—MORSE; Locomotive Taper Reamers, Tapering $\frac{3}{32}$ inch per Foot, with Morse Straight Shank.**

Diameter $\frac{1}{2}$ inch from Small End, in..	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$
Length over all, inches	$5\frac{5}{16}$	$5\frac{1}{2}$	$5\frac{1}{4}$	$5\frac{1}{2}$	$6\frac{1}{8}$	$6\frac{1}{4}$	$6\frac{1}{2}$	$7\frac{1}{8}$	$7\frac{1}{4}$	$7\frac{1}{2}$	$8\frac{1}{4}$
Length of Flutes, inches	4	4	4	4	5	5	5	6	6	7	8
Each	\$2.20	2.20	2.25	2.25	2.30	2.40	2.55	2.70	3.00	3.20	3.50
Diameter, inches	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	1	$1\frac{1}{16}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{5}{8}$
Length over all, inches	$8\frac{1}{8}$	$9\frac{1}{8}$	$11\frac{1}{4}$	$11\frac{1}{4}$	$11\frac{1}{4}$	$11\frac{1}{4}$	$12\frac{1}{8}$	$12\frac{1}{4}$	$12\frac{1}{4}$	$14\frac{1}{2}$	$14\frac{1}{2}$
Length of Flutes, inches	8	8	9	9	9	9	10	10	10	12	12
Each	\$3.80	4.10	4.50	4.80	5.10	5.40	5.70	6.20	6.60	7.00	7.60
Diameter, inches	$1\frac{3}{8}$	$1\frac{7}{8}$	$1\frac{1}{2}$	$1\frac{9}{16}$	$1\frac{5}{8}$	$1\frac{11}{16}$	$1\frac{3}{4}$	$1\frac{13}{16}$	$1\frac{7}{8}$	$1\frac{15}{16}$	2
Length over all, inches	$14\frac{1}{2}$	$14\frac{1}{2}$	$14\frac{1}{2}$	$16\frac{1}{2}$	$16\frac{1}{2}$	$16\frac{1}{2}$	$16\frac{1}{2}$	$18\frac{1}{2}$	$18\frac{1}{2}$	$18\frac{1}{2}$	$18\frac{1}{2}$
Length of Flutes, inches	12	12	12	14	14	14	14	16	16	16	16
Each	\$8.00	8.50	9.00	9.60	10.20	10.85	11.60	12.40	14.00	15.00	16.00

**No. 120B—Morse Bit Stock Taper Reamers.**

Nominal Size, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$1\frac{1}{16}$	$\frac{3}{4}$
Length over all, inches	$3\frac{7}{8}$	4	$4\frac{1}{8}$	$4\frac{1}{4}$	$4\frac{3}{8}$	$4\frac{1}{2}$	$4\frac{5}{8}$	$4\frac{3}{4}$	$4\frac{7}{8}$
Length of Flute, inches	$1\frac{3}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{8}$	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{3}{4}$
Each	\$0.45	.50	.55	.60	.70	.80	.90	1.05	1.20
Nominal Size, inches	$1\frac{1}{8}$	$\frac{7}{8}$	$1\frac{1}{2}$	1	$1\frac{1}{16}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Length over all, inches	5	$5\frac{1}{8}$	$5\frac{1}{4}$	$5\frac{3}{8}$	$5\frac{1}{2}$	$5\frac{5}{8}$	$5\frac{3}{4}$	$5\frac{7}{8}$	$5\frac{7}{8}$
Length of Flutes, inches	$2\frac{7}{8}$	3	$3\frac{1}{8}$	$3\frac{1}{4}$	$3\frac{3}{8}$	$3\frac{1}{2}$	$3\frac{5}{8}$	$3\frac{3}{4}$	$3\frac{3}{4}$
Each	\$1.45	1.65	1.95	2.20	2.35	2.45	2.60	2.70	2.70

Weight Each about, $\frac{1}{4}$ inch, 1 oz.; $\frac{3}{8}$ inch, $1\frac{1}{2}$ ozs.; $\frac{1}{2}$ inch, 2 ozs.; $\frac{3}{4}$ inch, $4\frac{1}{2}$ ozs.**No. 120D—Morse Taper-Pin Reamers, with Straight Shank.**

Size Number	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Diameter Small End, inches	.135	.148	.162	.183	.208	.240	.279	.331	.398	.482	.581	.706	.842	1.009	1.250
Length over all, inches	$2\frac{1}{4}$	$2\frac{5}{8}$	3	$3\frac{7}{16}$	$3\frac{7}{8}$	$4\frac{1}{8}$	$5\frac{1}{8}$	$6\frac{1}{8}$	$7\frac{1}{8}$	$8\frac{3}{8}$	$9\frac{3}{8}$	$11\frac{1}{8}$	$13\frac{1}{8}$	$15\frac{1}{8}$	$18\frac{1}{8}$
Length of Flute, inches	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{4}$	$3\frac{1}{4}$	$4\frac{1}{4}$	$5\frac{1}{4}$	$6\frac{1}{4}$	$8\frac{1}{4}$	$10\frac{1}{4}$	12	14	16
Each	\$1.00	1.00	1.25	1.50	1.75	2.00	2.25	2.50	3.00	3.50	4.00	4.75	5.50	6.50	7.75

Weight Each about, Size 0, $\frac{1}{8}$ oz.; Size 2, $\frac{1}{2}$ oz.; Size 4, $\frac{3}{4}$ oz.; Size 6, $1\frac{1}{4}$ ozs.; Size 8, 6 ozs.; Size 10, 11 ozs.; Size 12, 1 lb.

Packed Loose.

REAMERS.

BURRING.

Spiral Flutes, Bit Brace Shank.

Tool Steel; Polished.



Nos.	1	2	4
Total Length, inches.....	2 3/4	3 3/4	4 5/8
Length of Flute, inches.....	1	1 1/2	2
Length of Shank, inches.....	1 3/4	2 1/2	2 5/8
Size at Point, inches.....	7/32	7/16	1
Size at Large End, inches.....	3/4	1 1/4	2 7/16
Capacity Pipe, inches.....	1/2 to 1	1 1/2 to 1	1 to 2
Weight each about, ozs.....	3	6	19
Each.....	\$1.00	1.25	3.00



No. 120H1—Morse Center Reamers, with Straight

Shank.	1/4	3/8	1/2	5/8	3/4
Size Cut, inches.....	1/4	3/8	1/2	5/8	3/4
Length over all, inches..	1 1/2	1 13/16	2	2 1/4	2 3/4
Diameter Shank, inches..	1/4	3/8	1/2	5/8	3/4
Length Shank, inches..	3/4	1	1 1/4	1 3/4	2
Each.....	\$0.22	.25	.30	.50	.70

No. 120H2—Morse Center Reamer, with Straight

Shank.	1/4	3/8	1/2	5/8	3/4
Size Cut, inches.....	1/4	3/8	1/2	5/8	3/4
Length over all, inches..	1 1/2	1 13/16	2	2 1/4	2 3/4
Diameter Shank, inches..	1/4	3/8	1/2	5/8	3/4
Length Shank, inches..	3/4	1	1 1/4	1 3/4	2
Each.....	\$0.25	.30	.35	.60	.75

COUNTERSINKS.



Lightning, Round Shank.

Finest Tool Steel.

No.	515	525	516	526
Size	1/4 inch, with 1/2 inch Round Shank;	1/2 inch, with 1/2 inch Round Shank;	1/2 inch, with 1/2 inch Round Shank;	1/2 inch, with 1/2 inch Round Shank;
Length over all	3 3/4 inches.....	3 3/4 inches.....	4 1/2 inches.....	4 1/2 inches.....
Each	\$0.50	.50	.75	.75



Lightning, Square Shank.

No.	505	506
Size	1/4 inch, Square Shank for Bit Brace....	1/2 inch, Square Shank for Bit Brace....
Weight Each about	1/2 lb.	
Each	\$0.50	.75

BELL CENTERING PUNCHES.



Finest Tool Steel.

No. BC—Capacity up to 1 1/2 inches; Weight each about 1/2 lb..... \$1.00

Used by Machinists to mark the center of Round Iron (any diameter up to 1 1/2 inches), in order to place it between the Lathe centers correctly.

The Center Point slides back with the Rod when the Rod is inserted in the Cap. When the Rod fits its own size in the Cap, the Stem is struck with hammer or mallet and the Center Point strikes and indicates the Exact Center of the Rod.

COUNTERSINKS.



Finest Tool Steel.

No. 109A—Morse Three-Groove Bit Stock Countersinks.

Diameter, inches	3/8	1/2	5/8	3/4	7/8	1
Length over all, inches.....	4 1/4	4 1/4	4 3/4	5	5	5
Each.....	\$0.50	.60	.75	.90	1.05	1.20

Packed Loose.

- 476 A -

***COUNTERSINKS.**

Finest Tool Steel.



Morse Combined Drills and Countersinks, with No. 1 Morse Taper Shanks.

	Each
No. 109C22—Diameter of Body $7/16$ inch; Diameter of Drill, Gauge No. 22; Length over all $3^{15}/16$ inches; Weight each about $2\frac{1}{4}$ ozs.	\$1.00
No. 109C13—Diameter of Body $7/16$ inch; Diameter of Drill, Gauge No. 13; Length over all $3^{15}/16$ inches; Weight each about $2\frac{1}{4}$ ozs.	1.25



No. 109D—Morse Taper Shank Counter Bores.

Diameter Counterbore, inches	$3/8$	$7/16$	$1/2$	$9/16$	$5/8$	$11/16$	$3/4$	$13/16$	$7/8$	$15/16$
Diameter Guide, inches	$1/4$	$5/16$	$3/8$	$7/16$	$1/2$	$11/16$	$3/4$	$13/16$	$7/8$	$15/16$
Length over all, inches	$4^{11}/16$	$4^{13}/16$	$4^{15}/16$	$4^{17}/16$	$4^{19}/16$	$5^{11}/16$	$5^{13}/16$	$5^{15}/16$	$6^{11}/16$	$6^{13}/16$
Morse Taper Shank, No.	1	1	1	1	1	1	1	1	2	2
Each	\$1.40	1.40	1.40	1.40	1.40	1.50	1.50	1.50	1.80	1.80
Diameter Counterbore, inches	1	$1^{11}/16$	$1^{13}/16$	$1^{15}/16$	$1^{17}/16$	$1^{19}/16$	$1^{21}/16$	$1^{23}/16$	$1^{25}/16$	$1^{27}/16$
Diameter Guide, inches	$3/4$	$13/16$	$13/16$	$13/16$	$7/8$	$15/16$	$15/16$	$15/16$	$15/16$	1
Length over all, inches	$6^{11}/16$	$6^{13}/16$	$6^{15}/16$	$6^{17}/16$	$6^{19}/16$	$7^{11}/16$	$7^{13}/16$	$7^{15}/16$	$7^{17}/16$	$7^{19}/16$
Morse Taper Shank, No.	2	2	2	2	2	3	3	3	3	3
Each	\$1.80	1.80	2.00	2.00	2.00	2.20	2.40	2.60	2.80	2.80

Packed Loose.

FLAT DRILLS.

Finest Tool Steel.



No. FD—For Packer Ratchets.

(See Page 294).

Diameter, inches	$3/8$	$1/2$	$5/8$	$3/4$	$7/8$	1
Length over all, inches	6	6	6	6	6	6
Weight each about, ozs.	8	8	8	8	8	8
Each	\$0.40	.40	.40	.45	.45	.45

Packed Loose.

CENTER ARBORS.For Attaching Little Giant Drill Chucks to Lathes, Drill Presses and Blacksmiths' Drill Presses.
Finest Tool Steel.

	Each
No. 1—With $1/2$ inch Shank for No. 2/0 Little Giant Drill Chucks	\$0.75
No. 2—With $1/2$ inch Shank for No. 1/0 Little Giant Drill Chucks	.75



	Each
No. 15—With 1 inch Blank Shank, $4\frac{1}{2}$ inches Long, to fit No. 1 Little Giant Drill Chucks.	\$0.75



	Each
No. 9—With Morse No. 1 Taper Shank, to fit No. 2/0 Little Giant Drill Chucks	\$2.00
No. 10—With Morse No. 2 Taper Shank, to fit No. 1/0 Little Giant Drill Chucks	2.00
No. 11—With Morse No. 2 Taper Shank, to fit No. 1 Little Giant Drill Chucks	2.00
No. 12—With Morse No. 2 Taper Shank, to fit No. 2 Little Giant Drill Chucks	2.00
No. 13—With Morse No. 3 Taper Shank, to fit No. 1 Little Giant Drill Chucks	2.25
No. 14—With Morse No. 3 Taper Shanks, to fit No. 2 Little Giant Drill Chucks	2.25

Average Weight Each about 1 lb.

Packed Loose.

MT



TAPER PINS.

MORSE; Taper $\frac{1}{4}$ inch to the Foot. Finest Tool Steel.

Number.	136A0	136A1	136A2	136A3	136A4	136A5	136A6	136A7	136A8	136A9	136A10
Diameter at Large End, inches.	.156	.172	.193	.219	.250	.289	.341	.409	.492	.591	.706
Approximate Fractional Sizes.	$\frac{5}{32}$	$\frac{11}{64}$	$\frac{9}{16}$	$\frac{7}{8}$	$\frac{1}{4}$	$\frac{19}{64}$	$\frac{11}{32}$	$\frac{13}{32}$	$\frac{1}{2}$	$\frac{19}{32}$	$\frac{23}{32}$
Length, inches.	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100	Per 100
$\frac{1}{8}$	\$1.80	\$2.00	\$2.10	\$2.30	\$2.50	\$2.75	\$3.00	.....	.....	.....	.....
$\frac{1}{4}$	2.05	2.25	2.35	2.55	2.75	3.00	3.25	\$3.75	.....	.....	.....
$\frac{3}{8}$	2.50	2.60	2.80	3.00	3.25	3.50	4.00	\$4.65	.....	.....
$\frac{1}{2}$	2.85	3.05	3.25	3.50	3.75	4.25	5.00	\$7.00	\$9.00
$\frac{3}{4}$	3.30	3.50	3.75	4.00	4.50	5.40	7.50	9.50
$2\frac{1}{4}$	3.75	4.05	4.35	4.75	5.80	8.00	10.00
$2\frac{1}{2}$	4.40	4.75	5.25	6.25	8.60	10.75
$2\frac{3}{4}$	5.20	5.75	6.75	9.20	11.50
$3\frac{1}{4}$	5.70	6.25	7.25	9.80	12.25
$3\frac{1}{2}$	6.25	6.75	7.80	10.50	13.25
$3\frac{3}{4}$	6.75	7.25	8.40	11.20	14.25
$4\frac{1}{4}$	7.75	9.00	11.90	15.25
$4\frac{1}{2}$	8.25	9.60	12.60	16.25
$4\frac{3}{4}$	10.20	13.30	17.25
$5\frac{1}{4}$	10.80	14.00	18.25
$5\frac{1}{2}$	11.40	14.70	19.25
$5\frac{3}{4}$	15.40	20.25
$6\frac{1}{4}$	16.10	21.25
$6\frac{1}{2}$	16.80	22.25
$6\frac{3}{4}$	23.25
$7\frac{1}{4}$	24.25
$7\frac{1}{2}$	25.25



Star Drill.

Nos.	$\frac{1}{8}$	$\frac{2}{8}$	$\frac{3}{8}$
Diameter of Shank, inches.	$\frac{1}{8}$	$\frac{9}{16}$	$\frac{3}{8}$
Length of Shank, inches.	2	$3\frac{1}{2}$	$4\frac{1}{2}$
Holds Drills Nos.	0 to $\frac{3}{4}$	0 to $\frac{3}{8}$	0 to $\frac{1}{2}$
Weight each about, lbs.	1	$1\frac{1}{2}$	3
Each	\$1.00	1.50	3.00

BEACH PATENT
DRILL CHUCK.

Finest Tool Steel.

No.	121/0	121/1	121/2	121/3	121/4
Morse; Holding from 0 to $\frac{3}{8}$ inch Diameter (for Jewelers); Weight each about $2\frac{1}{2}$ ozs.
Morse; Holding from 0 to $\frac{1}{4}$ inch Diameter; Weight each about $14\frac{1}{4}$ ozs.
Morse; Holding from 0 to $\frac{3}{8}$ inch Diameter; Weight each about $1\frac{1}{4}$ lbs.
Morse; Holding from $\frac{1}{16}$ to $\frac{1}{2}$ inch Diameter; Weight each about 3 lbs.
Morse; Holding from $\frac{3}{16}$ to $\frac{3}{8}$ inch Diameter; Weight each about 3 lbs.
Each	\$8.00	8.00	8.50	10.00	11.00

ALL CHUCKS HAVE TO BE FITTED TO EACH LATHE THEY ARE USED ON.

Packed Loose.

CHUCKS.

Finest Tool Steel.

Barber's Lathe for Holding Square
Shank Drills.

No.	112
With $\frac{1}{2}$ inch Round Shank	.....
Weight Each about $2\frac{1}{2}$ lbs.	.....
Each	\$1.50



No. 121/1 to 121/4.

Each



Little Giant Improved Drill.

Nos.	00	0	1	2 1/2
Diameter, inches.	1 1/16	2 1/2	3	4
Holding Drills, in.	0 to 1/4	0 to 1/2	0 to 3/4	0 to 1
Wgt. each about, lbs.	1	4	6	10 1/2
Each	\$7.00	8.00	9.00	11.00



Morse Center Drill Chuck.

Each Chuck will Hold but One Size of Drill—that for which it is specially made.

No. 124/1—Chuck can be made to Hold any One Size Drill from 1/16 to 3/16 inch; Outside Diameter of Chuck 3/4 inch; Length over all 2 1/16 inches. **Each** \$2.50

No. 124/2—Chuck can be made to Hold any One Size Drill from 3/16 to 5/16 inch; Outside Diameter of Chuck 1 1/4 inches; Length over all 2 1/2 inches. **Each** 2.50

Arbor for Center Drill Chuck .50

CHUCKS.

Finest Tool Steel.



Hartford Drill.

Nos.	0H	1H	2H
Diameter, inches	1 1/4	2 1/4	3 1/4
Holding Drills, inches	0 to 1/4	0 to 1/2	0 to 3/4
Weight each about, lbs.	1 1/2	2 1/2	5
Each	\$6.00	7.00	8.00

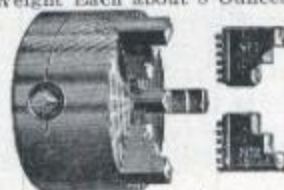


Screws for Little Giant Improved Drill Chucks.

In ordering specify whether your Chuck has a * Stamped on it.

For Nos.	00	0	1	2	2 1/2
Screws, each	\$1.00	1.00	1.00	1.10	1.50

Weight Each about 8 Ounces.



Cushman's.

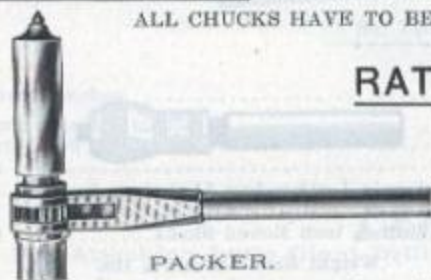
Universal Geared Scroll, with 2 Sets of Jaws.

No.	2U
Diameter, inches	2
Weight each about, lbs.	1 1/2
Each	\$8.50

ALL CHUCKS HAVE TO BE FITTED TO EACH LATHE THEY ARE USED ON.
Packed Loose.

RATCHET DRILLS.

Finest Tool Steel.



PACKER.

Nos.	1	2	3	4
Length of Handles, inches.	10	12	15	17
Length of Head, inches.	8 1/4	9	10	10 1/2
Weight each about, lbs.	6 1/2	7	10 1/2	14
Each	\$10.50	13.50	16.00	19.00

Ratchet Drills Nos. 1, 2, 3, 1B and 2B take Morse Drills No. 109E1, and No. 4 takes Morse Drills No. 109E2. No. FD Flat Drills on Page 292 will Fit all of these Ratchet Drills.



PACKER, BOILER.

Nos.	1B	2B
Length of Handles, inches.	10	13
Length of Head, inches.	4 1/2	5
Weight each about, lbs.	4 1/2	5
Each	\$9.00	10.50

RENSHAW'S.

Each

No. 3R—WITH COLLET AND 4 SOCKETS; 15 inch Handle; Weight each about 9 lbs. \$15.00

By transferring the collet and feed screw, as arranged for right-hand drilling, to opposite ends of the spindle, the ratchet may be used for left-hand drilling. Four sockets are furnished with each Drill, Nos. 1, 2 and 3 correspond in size of holes with the Morse Taper Sockets. Socket No. 5 is for square shank drills of 1/2 to 1 1/2 inch diameter. Nos. 3 and 5 Sockets are held in the spindle by screw thread. Nos. 1 and 2 Sockets have taper shanks, fitting No. 3 Socket, and can be forced out of position by turning in the feed screw.

One in a Package.



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DRILLS.**BLACKSMITHS' TIRE.**

Each

No. 2—Japanned Cast Iron Frame, Crank and Feed Wheel; Polished Steel Feed Screw and Chuck; Painted Hardwood Grip on Crank; Diameter of Feed Screw $1\frac{1}{2}$ inches; Will Drill to the center of a 6 inch Circle; Length over all 30 inches; Tail End of Frame Adjustable with Ratchet Teeth; Weight each about 26 lbs. \$3.00



Each

No. 1—Natural Finish Cast Iron Frame, Crank and Feed Wheel; Polished Steel Feed Screw and Chuck; Plain Finish Hardwood Grip on Crank; Diameter of Feed Screw $1\frac{1}{2}$ inches; Will Drill to the center of a 7 inch Circle; Length over all $28\frac{1}{2}$ inches; Tail End of Frame Adjustable with Ratchet Teeth; Weight each about 22 lbs. \$2.40

Will take Morse Square Shank Drills No. 109E.
One in a Crate.



Bench.

Each

No. 69—BUFFALO; Japanned Cast Iron Frame and Wheels; Steel Axles, Chuck and Crank; Height over all 26 inches; Will drill to center of a 9 inch Circle; fitted for $\frac{1}{2}$ inch Drill Shank; Weight each about 59 lbs. \$15.00

One in a Crate.



POST DRILLS.

BUFFALO.

These Drills are Strong, Simple and of Rigid and Durable Design, careful attention being given to Distribution of Metal along lines of Greatest Strain. They have Painted Cast Iron Frames, Gearing, Feed, Fly Wheels and Tables; Steel Shafts, Axles, Chucks and Cranks.



Each

No. 149—HAND FEED; WITHOUT FLY-WHEEL;

The Feed has a $3\frac{1}{2}$ inch run, and will Drill Holes up to $\frac{3}{4}$ inch, to Center of a 12 inch Circle; Chuck fitted for Drills with $\frac{1}{2}$ inch Straight Shank; Diameter of Shaft $1\frac{1}{4}$ inches; Diameter of Chuck $1\frac{3}{4}$ inches; Round Table 7 inches in Diameter; Diameter of Feed Wheel 6 inches; Diameter of Drive Wheel 6 inches; Length of Crank $12\frac{1}{2}$ inches; Bolted to a Natural Finish Hardwood Upright 33 inches Long, $4\frac{1}{2}$ inches Wide and $1\frac{1}{4}$ inches Thick; Height over all $35\frac{1}{2}$ inches; Weight each about 52 lbs.....

\$7.00



Each

No. 151—BALL BEARING, WITH DOUBLE GEARED SELF-FEED:

The Feed has a 3 inch Run and will Drill Holes up to 1 inch, to Center of a 12 inch Circle; Chuck fitted for Drills with $\frac{1}{2}$ inch Straight Shank; Diameter of Shaft $1\frac{1}{4}$ inches; Diameter of Chuck $1\frac{3}{4}$ inches; Round Table 7 inches in Diameter; Diameter of Feed Wheel 5 inches; Diameter of Drive Wheel 6 inches; Diameter of Fly Wheel $12\frac{1}{2}$ inches; Length of Crank 13 inches; Bolted to a Natural Finish Hardwood Upright 33 inches Long, $4\frac{1}{2}$ inches Wide and $1\frac{1}{4}$ inches Thick; Height over all 36 inches; Weight each about 65 lbs.....

\$8.50



Each

No. 155—BALL BEARING, WITH DOUBLE GEARED SELF-FEED: The Feed has a $3\frac{1}{4}$ inch Run, and will Drill Holes up to 1 inch, to Center of a 15 inch Circle; Chuck fitted for Drills with $\frac{1}{2}$ inch Straight Shank; Diameter of Shaft $1\frac{1}{2}$ inches; Diameter of Chuck $1\frac{3}{4}$ inches; $7\frac{1}{2}$ inch Square Table; Diameter of Feed Wheel 5 inches; Diameter of Drive Wheel 6 inches; Diameter of Fly Wheel $13\frac{1}{2}$ inches; Length of Crank 13 inches; Bolted to a Natural Finish Hardwood Upright 38 inches Long, $5\frac{1}{4}$ inches Wide, $1\frac{3}{4}$ inches Thick; Height over all 47 inches; Weight each about 94 lbs.....

\$13.00

One in a Crate.

-486B-

LATHES.



*POST DRILLS.

BUFFALO.

These Drills are Strong, Simple and of Rigid and Durable Design, careful attention being given to Distribution of Metal along lines of Greatest Strain. They have Painted Cast Iron Frames, Gearing, Feed, Fly Wheels and Tables; Steel Shafts, Axles, Chucks and Cranks.

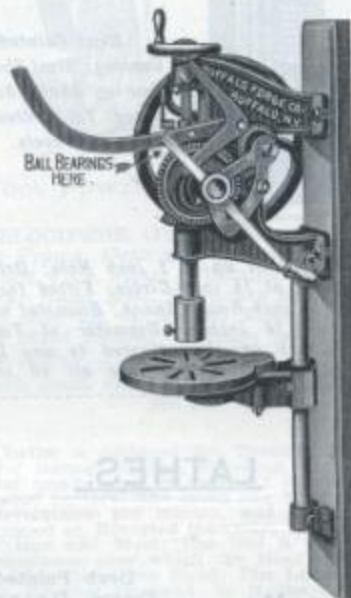


Each

±No. 90—Ball Bearing, WITH AUTOMATIC HAND AND LEVER FEED; Two Speeds for Drilling and Three for Automatic Feed, make this Machine adaptable to a Large Range of Work; Has a 5 inch Run and will Drill Holes up to $1\frac{3}{4}$ inches to the Center of a 22 inch Circle; Spindle $1\frac{1}{8}$ inches in Diameter; Chuck Fitted for Drills with $\frac{5}{16}$ inch Straight Shank; Diameter of Shaft $1\frac{1}{4}$ inches; Diameter of Chuck $2\frac{1}{8}$ inches; Round Table 11 inches in Diameter; Diameter of Feed Wheel 6 inches; Diameter of Drive Wheel $6\frac{3}{4}$ inches; Diameter of Fly Wheel 16 inches; Length of Crank $14\frac{1}{2}$ inches; Bolted to a Plain Finished Hardwood Upright 48 inches Long, $5\frac{1}{2}$ inches Wide and 2 inches Thick; Height over all 46 inches; Weight each about 325 lbs. \$55.00

±No. 90P—WITH TIGHT AND LOOSE PULLEYS FOR POWER; Otherwise Same as No. 90; Weight each about 330 lbs. 60.00

One in a Crate.

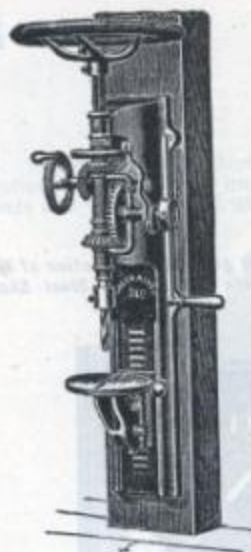


Each

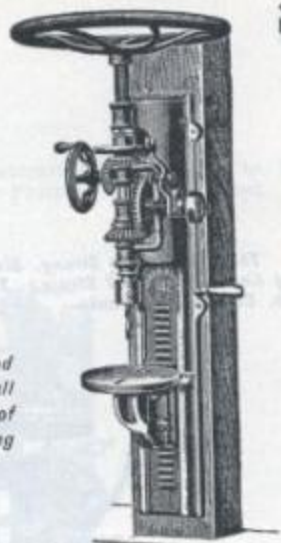
±No. 104—Ball Bearing, WITH AUTOMATIC HAND AND LEVER FEED; Two Speeds; Has a 4 inch Run and will Drill Holes up to $1\frac{1}{2}$ inches to the Center of an 18 inch Circle. Spindle $1\frac{1}{4}$ inches in Diameter; Chuck Fitted for Drills with $\frac{1}{2}$ inch Straight Shank. Diameter of Shaft $1\frac{3}{8}$ inches; Diameter of Chuck $2\frac{1}{2}$ inches; Diameter of Table $15\frac{1}{2}$ inches; Diameter of Feed Wheel 9 inches; Diameter of Drive Wheel $7\frac{3}{4}$ inches; Diameter of Fly Wheel 22 inches; Length of Crank $14\frac{1}{2}$ inches; Bolted to a Plain Finished Hardwood Upright 72 inches Long, 9 inches Wide and 2 inches Thick; Height over all 74 inches; Weight each about 140 lbs. \$30.00

*DRILLING MACHINES.

GREEN RIVER.



Black Painted Cast Iron Frame, Balance Wheel, Table and Gearing; Steel Shafts, Axles, Crank and Swinging Table; Ball Bearing Shaft; Automatic Feed, capable of Three Changes of Speed; Table fitted to Forked Arm, can be removed for Drilling Tires on Wheels.



±No. 740—Will Drill up to 1 inch Hole; Drills to center of 15 inch Circle; Fitted for Drill Bits with $\frac{1}{2}$ inch Round Shank; Diameter of Balance Wheel 16 inches; Diameter of Table 8 inches; Crank can be adjusted to any Length up to 18 inches; Height over all 40 inches; Weight each about 185 lbs.....\$20.00

Each

±No. 742—Will drill up to 1 inch Hole; Drills to center of 15 inch Circle; Fitted for Drill Bits with $\frac{1}{2}$ inch Round Shank; Diameter of Balance Wheel 22 $\frac{1}{2}$ inches; Diameter of Table 9 $\frac{1}{2}$ inches; Crank can be adjusted to any Length up to 18 inches; Height over all 50 inches; Weight each about 232 lbs.....\$37.00

Each

One in a Crate.

LATHES.



Drab Painted Cast Iron Frame, Drive Wheel, Treadle, Slide Rests and Heads; Cast Steel Bed; Steel Axles and Shafts; Complete with 5 Turning Tools; The Drive Wheel has Two Grooves of Different Depths on its Face to give a Change of Speed; The Lathe Head has a 2 inch Face Plate, Spur Center, Screw Center and Drill Chuck to hold Twist Drills up to $\frac{1}{4}$ inch in Diameter; On the outer side of the Pulley is fitted an Emery Wheel 4 $\frac{1}{2}$ inches in Diameter by $\frac{1}{2}$ inch Thick, and

a Drill Spindle to hold Small Drill Points for Wood Boring; The Tail Stock has a Screw Feed Center which is secured at any point by a Clamp.

Each

No. 1—GOODELL'S; Swing of Lathe 5 inches; Length of Bed 24 inches; Distance between Centers 13 $\frac{1}{2}$ inches; Height over all 24 inches; Diameter of Drive Wheel 13 $\frac{1}{2}$ inches; Round Leather Belt $\frac{1}{2}$ inch Thick; Weight each about 56 lbs.....\$10.00

One in a Case.

SCROLL SAW ATTACHMENT.



Each

No. 2—Scroll Saws; To fit No. 1 Goodell's Lathe; Drab Painted Cast Iron Frame; Polished Hardwood Arms; Attached to Lathe with one Heavy Bolt and Nut; Length over all 21 inches; Weight each about 10 lbs.....\$1.50

One in a Case.

CIRCULAR SAW ATTACHMENT.



Each

No. 3—Circular Saw; To fit No. 1 Goodell's Lathe; Consisting of a Saw Table 6x7 inches; One Circular Saw 3 inches in Diameter, and a Saw Arbor; Weight each about 1 lb.....\$1.00

Packed Loose.

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LATHES.



BARNES', with Velocipede Foot Power.

No. 55—VELOCIPEDE (Factory No. 3); Painted Iron Frame, Gear and Pulleys; Including 3 Centers (1 a Spur), 2 Tool Rests and Sockets, and 1 Turned Face Plate; Height over all 48 inches; Floor Space required 24x56 inches; Distance between Centers 36 inches.....

Each

\$40.00

Weight Each about 230 lbs.; Boxed for Shipment, about 320 lbs.

No. 55 Lathe is designed for Wood Turning; Will take in Stuff 12 inches in Diameter and 2 feet Long; Speed can be varied from 1,000 to 2,000 Revolutions per minute; Seat can be moved readily along to any part of the Bed that the work requires; The Lathe is made entirely of Iron and Steel, except the Bed, which is Wood; Centers are accurately fitted to Taper Holes; No Wrench is required to adjust the Tail Stocks or Tool Rests and Sockets, Hand Wheels being used instead.



No. 93—VELOCIPEDE (Factory No. 4); Painted Iron Frame, Gear and Pulleys; Including 1 Turned Face Plate, 2 Pointed and 1 Spur Centers; Hand Rest, Wrenches and Belting; Height over all 44 inches; Floor Space required 24x34 inches; Distance between Centers 20 inches

Each

\$50.00

Weight Each about 210 lbs.; Boxed for Shipment, about 265 lbs.

No. 93 Lathe is designed for Turning both Wood and Iron, and for Boring, Drilling, Polishing, etc. It is a desirable size for small work; It swings 7 inches and takes 20 inches between centers; The speed can be varied from 1,000 to 2,000 Revolutions per minute, and the motion can be Started, Stopped or Reversed Instantly; This Lathe is made entirely of Iron and Steel; The Bed is solid and has V-shaped Projections, over which the Head and Tail Stocks, Hand and Slide Rests are fitted; The Lead Screw for the Carriage is operated by hand, by it the Carriage can be traveled 20 inches, the entire distance between Centers; The Carriage can be engaged or disengaged instantly from the Lead Screw; The Cross Feed Way on which the Tool Post moves can be set at any desired angle for Taper Turning and Boring; The Tail Stock can be moved and set at any point desired by the simple turning of the Hand Wheel; or it can be taken off entirely, thus leaving the Bed free for Face Plate or Chuck Work; The Head Stock Spindle is Hollow; Size of Hole $\frac{1}{2}$ inch; The Lead Stock Spindle has Taper Bearings and is capable of very nice adjustment; The Tail Stock Center is Self-Discharging.



No. 97.

No. 97—VELOCIPEDE (Factory No. 4½); Painted Iron Frame, Gear and Pulleys; Height over all 46 inches; Floor Space required 24x42 inches; Distance between Centers 25 inches; Swings 9 inches.....

Each

\$75.00

Weight Each 270 lbs.; Boxed for Shipment, about 340 lbs.

No. 97 is a Back-Geared Screw Cutting Lathe; Feeds Right or Left, and Cuts Screws Right or Left without change of Gearing; The Carriage is Adjustable for Taper Boring or Ball Turning; It is thoroughly Gibbed for taking up wear.

The Tail Stock has Slide Movement to Adjust Centers for Turning Tapers; The Head Stock has Hollow Spindle for Rods up to $\frac{1}{2}$ in.; All the Gearing is Cut from Solid Metal; All Parts are made of Steel where this would best serve the purpose.

It is Indexed for Threads 5 to 40 and the Change Gears Furnished can be combined for many other Threads; It Swings $\frac{3}{4}$ in. over Tool Carriage.

The Small Pulley on Cone is $2\frac{1}{2}$ in.; the Large Pulley 4½ in.; It has Three Speeds, and is suitably arranged for Heavy or Light Work in Turning or Polishing.

WHEN IT IS POSSIBLE TO DO SO, CHUCKS SHOULD BE FITTED TO LATHES BEFORE BEING SHIPPED.

LATHES.



BARNES', with Velocipede Foot Power.

±No. 113—VELOCIPEDE (Factory No. 5); Painted Iron Frame, Gear and Pulleys; Distance between Centers 34 inches, Swings 11 inches; Height over all 48 inches; Floor Space 24x54 inches; Weight Each about 385 pounds; Boxed for Shipment about 500 pounds\$100.00

±No. 115—VELOCIPEDE (Factory No. 5); Painted Iron Frame, Gear and Pulleys; Distance between Centers 40 inches, Swings 11 inches; Height over all 48 inches; Floor Space required 24x64 inches; Weight Each about 420 pounds; Boxed for Shipment about 530 pounds\$105.00

±No. 129—Fixtures to raise the Head and Tail Stocks, Extra and Tool to bore out and swing 17 inches in diameter. \$10.00

±No. 131—Hand Rest, with Sockets for Hand Turning. 3.00

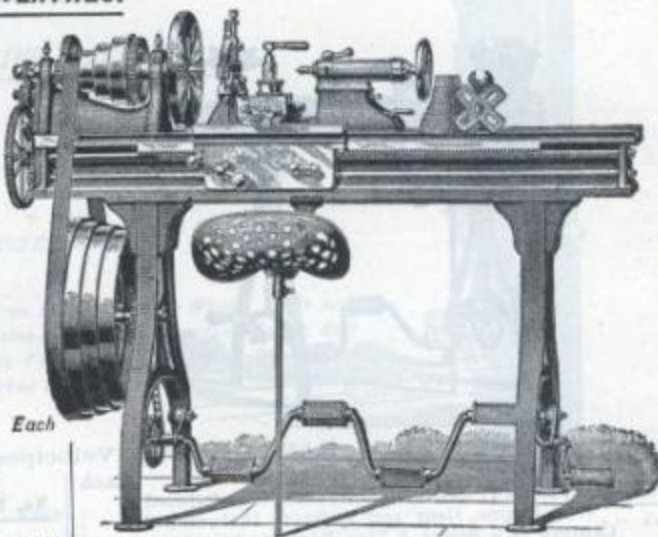
±No. 133—Countershaft only for above 15.00

Swings 6½ inches over the Tool Carriage; With its Back-Gearing and Cone Pulleys the Lathe has a Great Range of Speed.

The Head Stock has a Steel Spindle with $\frac{11}{16}$ inch Hole through its Entire Length; The Boxes are accurately fitted to the Spindle, with provision to keep them true and to take up Wear; The Tail Stock can be readily set at any desired point, or taken altogether from the Lathe Bed, thus leaving it free for Face Plate or Chuck Work; It can also be set over for Turning Tapers; The Spindles of both Head and Tail Stocks are of Steel, with positively true Taper Holes for the reception of the Centers, and the Tail Stock Center is Self-Discharging; The Tool Carriage is Glibbed to the Bed; Not made with Automatic Cross Feed; On a Small Lathe, less than 15 or 16 inches Swing, Automatic Cross Feed is of no particular advantage; The Tool Carriage Swivels so that the Tool can be set to work at any desired angle and it also adapts the Lathe for Taper Boring; These Features are of Greater Value than Automatic Cross Feed; All the Works are securely protected from chips and dirt, thus insuring long wear and durability to the most costly and vital parts of the Lathe; It is indexed for Threads 4 to 40, and the Change Gears furnished can be combined for many other Threads; As a Right or Left Screw Cutting Lathe it is perfect; all the Gearing is Cut from Solid Metal in the Best Machinery known for Gear Cutting, and is as True and Noiseless as it is possible for Metal Gearing to be.

BED—Extra Length. The Dimensions of No. 113 Velocipede Lathe are in true proportion; Gunsmiths and others often require a Greater Length of Bed, and do not care for Proportionate Strength in other parts; For such we can furnish a Bed that will admit of 40 inches between Centers. See No. 115.

Each



BARNES', with Velocipede Foot Power.

(Factory No. 5½); Painted Iron Frame, Gear and Pulleys; Swing on Face Plate 13 inches; Swing over Carriage 8 inches.

Nos.....	±137	±139	±141
Length of Bed, feet	6	7	8
Distance between Centers, inches...	45	57	69
Height over all, inches	46	48	46
Floor Space Required, inches	24x72	24x84	24x96
Weight of Lathe about, pounds	690	740	790
Weight Boxed about, pounds	850	890	950
Each	\$145.00	155.00	165.00

Extra

±No. 195—Countershaft only, for Lathes Nos. 137 to 141\$20.00

±No. 163—Hand Rest, with Sockets, for Hand Turning. 3.50

Nos. 137 to 141 Lathes are designed to do as large work as it is practical to do by foot power; They are Strong, Substantial Lathes for a job or manufacturing shop where the demand on a Lathe is from the Smallest to the Largest Work.

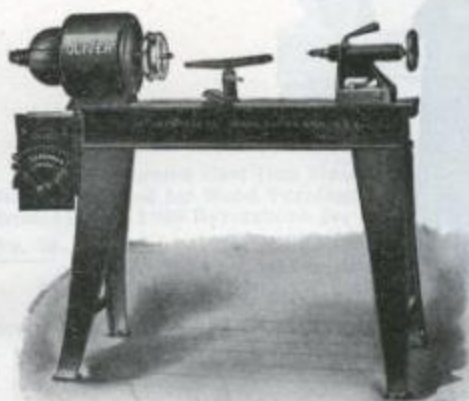
Patent Twin Screw Feed and Screw Cutting Combination, which makes Change of Feed in the Tool Carriage instead of in the Head Stock; This greatly simplifies and reduces the number of parts commonly used for these purposes.

The Tail Stock has Side Movement to Adjust Centers for Turning Tapers; The Head Stock has Hollow Spindle for Rods up to $\frac{1}{2}$ inch; All the Gearing is Cut from Solid Metal; They are Indexed for Threads 4 to 24, and the Change Gears furnished can be combined for many other Threads.

WHEN IT IS POSSIBLE TO DO SO, CHUCKS SHOULD BE FITTED TO THE LATHES BEFORE BEING SHIPPED.

LATHES.

OLIVER MOTOR HEAD SPEED.



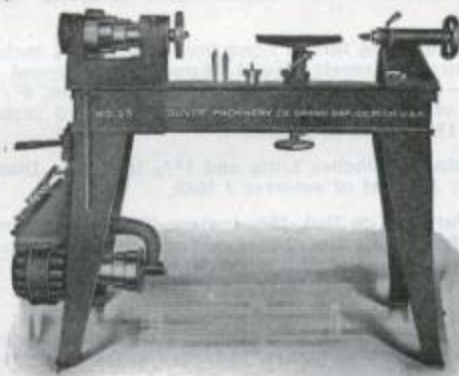
Especially adapted for use in Manual Training Schools; Self-contained; No Overhead Countershaft; No Belting to care for; Light Unobstructed; No Accumulation of Dust; No Accidents from Tangled Belting; Only Two Bearings to Oil; Speed Control at Operator's Hand; Greater Number of Speed Variations; Costs Less to Maintain. Head Stock consists of a Standard High Grade Motor of the Variable Speed Type, Fully Enclosed with ample overload capacity; Hollow Spindle; Thrust Bearing; Hand Wheel for Adjustments; Bronze Spindle Bearings; Controller Specially designed for this Lathe; Equipped with $\frac{3}{4}$ inch Spur Center, $\frac{1}{2}$ inch Cup Center, Pair Conical Centers, $2\frac{1}{2}$ inch Rosette Chuck, 6 inch Face Plate, 12 inch Rest and Holder; Center Driving Rod; Shifter Lever and Rod; Head Stock has $1\frac{1}{4}$ inch Spindle; Hole through Spindle $\frac{1}{2}$ inch in Diameter; Uses No. 2 Morse Taper; Speed 600 to 3,000 Revolutions per Minute. Tail Stock has $1\frac{1}{4}$ inch Spindle; 8 inch Bearing; Traverse of Spindle 4 inches.

No. 53A — WITH 48 INCH BED, TO TURN 24 INCHES LONG	Each \$125.00
No. 53B — WITH 60 INCH BED, TO TURN 36 INCHES LONG	125.00
No. 53C — WITH 48 INCH BED, TO TURN 24 INCHES LONG, WITH HAND FEEDING CARRIAGE AND COMPOUND SWIVEL REST	175.00
No. 53D — WITH 60 INCH BED, TO TURN 36 INCHES LONG, WITH HAND FEEDING CARRIAGE AND COMPOUND SWIVEL REST	175.00

One in a Crate; Weight Each about 500 lbs.

OLIVER MOTOR DRIVE SPEED.

Using Alternating Current.



This is the only High Class Motor Driven Speed Lathe on the market that has been designed for using Alternating Current. We furnish it for One, Two or Three Phase, and 110 or 220 Volts, as may be required. The Head Stock, Tail Stock and General Equipment are the same as used on the No. 19 Lathe shown on page 302. The Motor Drive consists of an Alternating Current Motor, Capacity One-half H. P., 1,700 Revolutions per Minute, with the Armature Shaft extended at one end and supporting a Four Step Cone Pulley of Correct Sizes to give Desirable Spindle Speed and Receiving an Out-board Bearing to hold it rigidly in alignment; Motor and Out-board Bearing are mounted on a Bracket attached to the Left Hand Leg. Motor Bracket may be raised $\frac{1}{4}$ inch by a Quarter Turn of the Handle at the end of the Bed; This slackens the Belt, making it less difficult to shift the Belt to the different Steps of the Cone. This Operation may be used to Stop the Lathe for Short Periods, namely, for Measuring Work; The Motion is then dropped back and the Lathe speeds up at once; For taking up the Stretch in the Belt there is a Fine Adjustment of the Motor Bracket Independent of the Raising Movement above mentioned.

No. 55A — WITH 48 INCH BED, TO TURN 24 INCHES LONG; Weight each about 450 lbs.	Each \$250.00
No. 55B — WITH 60 INCH BED, TO TURN 36 INCHES LONG; Weight each about 475 lbs.	250.00
No. 55C — WITH 60 INCH BED, TO TURN 36 INCHES LONG, WITH HAND FEEDING CARRIAGE AND PLANE REST; Weight each about 500 lbs.	330.00
No. 55D — WITH 60 INCH BED, TO TURN 36 INCHES LONG, WITH HAND FEEDING CARRIAGE AND COMPOUND SWIVEL REST; Weight each about 525 lbs.	350.00
No. 55E — WITH 60 INCH BED, TO TURN 36 INCHES LONG, WITH POWER FEEDING CARRIAGE AND COMPOUND SWIVEL REST; Weight each about 550 lbs.	430.00

One in a Crate.



LATHES.



THE NEW OLIVER SPEED.

This Lathe is Specially Designed for use in Educational Institutions, but its qualities of Efficiency, Durability and Utility recommend it highly for Shop Use as well. It will stand very hard usage. Essentially a Wood-working Tool; It has been successfully used for Filing, Polishing and Turning Brass and similar Metals. Its Mechanical Design and Careful Construction place it on a par with the Best Iron-working Tools. The Head Stock is Lubricated perfectly by Ring Oilers; The Bearings have Bronze Bushings; The Spindle is Machine Ground and of the Best Crucible Steel; End Thrust is taken care of by the ends of the Cone Pulley pressing against the Bushings; To take up end wear the Cone Pulley may be Expanded, as the Smallest Step is screwed into the rest of it. The Tail Stock is of the Open Side Design, allowing the Tool Post to pass by it when Hand-feeding Carriage is used; Tail Spindle is well proportioned and will give no trouble. The Bed is One Solid Casting, Heavily Ribbed to Eliminate Vibrations; The Legs are Heavy and Rigidly fastened with Three Point Bearing, which does away with undue strains; At the left end of the Bed is a Lever which easily Operates the Shifter Rod; Center Rod hangs conveniently from a Bracket. Countershaft furnished regularly with this Machine has Self-Oiling Bearing; The Loose Pulley is fitted with a well Lubricated Bronze Collar which runs Loose both on the Shaft and inside the Pulley, thus furnishing Double Wearing Surface.

EQUIPMENT—For this Lathe, besides the Machine already for use, according to numbers below, consists of One Rest Socket complete with Clamp, and Cup Center, One Spur Center, Two Conical Centers, One 6 inch Face Plate, One 12 inch Long Tool Rest, One Rosette Chuck, One Center Rod, and One Countershaft, complete with Tight and Loose Pulleys, Driving Cone, New Shifter and Ring Oilers.

HEAD STOCK—12½ inches Long, 6 inches Wide on Bottom; Spindle 15½ inches Long over all and 1½ inches in Diameter; Hole through Spindle ½ inch in Diameter; Spindle Bored to receive No. 2 Morse Taper; Speed of Spindle 700, 1195, 1920, 2800 R. P. M.; Cone on Spindle, four Steps—2½ inches, 3½ inches, 4½ inches, 6½ inches in Diameter; 1½ inch Face. Distance from Floor to Center of Spindle 42 inches; Front Bearing 3 inches Long and 1½ inches in Diameter; Rear Bearing 3 inches Long and 1½ inches in Diameter.

TAIL STOCK—7 inches Long; 6 inches Wide on Bottom; Spindle 8 inches Long and 1½ inches in Diameter; Spindle Bearing 8 inches Long; Traverse of Spindle 4 inches; Amount of set-over 1 inch.

CARRIAGE—Traverse of Cross Speed 6½ inches; Travel of Carriage on Bed, 36½ inches; Traverse of Compound Rest 3½ inches; Length of Bearing on the Bed 10 inches; Tool Post Slot 2 inches Long and 1½ inches wide.

BED—Lengths 48 and 60 inches; Width 6½ inches; Depth 6¼ inches; Height from Floor to Top of Bed 36 inches.

COUNTERSHAFT—Length 27¼ inches; Diameter 1¼ inches; Hangers, 8 inch Drop; Bearings 5 inches Long and 1¼ inches in Diameter; Cone, Four Steps—6½ inches, 8 inches, 9¼ inches, 10 inches in Diameter; 1¼ inch Face.

	Each
No. 19A—LENGTH OF BED 48 INCHES; WITH LONG LEGS; Weight each, crated, about 450 lbs.....	\$140.00
No. 19B—LENGTH OF BED 60 INCHES; WITH LONG LEGS; Weight each, crated, about 480 lbs.....	140.00
No. 19C—LENGTH OF BED 48 INCHES; WITH BENCH LEGS; Weight each, crated, about 420 lbs.....	134.00
No. 19D—LENGTH OF BED 60 INCHES; WITH BENCH LEGS; Weight each, crated, about 450 lbs.....	134.00
No. 19E—WITH NO BED OR LEGS; Weight each, crated, about 235 lbs.....	124.00
No. 19F—LENGTH OF BED 60 INCHES; WITH LONG LEGS AND CARRIAGE WITH PLAIN TOOL REST; Weight each, crated, about 545 lbs.....	240.00
No. 19G—LENGTH OF BED 60 INCHES; WITH LONG LEGS AND CARRIAGE WITH COMPOUND SWIVEL REST; Weight each, crated, about 545 lbs.....	260.00

One in a Crate.

MT



LATHES.



BARNES' BENCH.

Drab Painted Cast Iron Heads, Slide Rests, Feet, Pulley and Hand Wheels; Steel Face Plate, Axles and Bolts; Designed for Wood Turning; Will take in Stuff 12 inches in Diameter and 3 feet Long; Speed can be varied from 1,000 to 2,000 Revolutions per minute. Each

No. 59—(Factory No. 3); Hardwood Bed 54 inches Long, 4 inches Thick; Diameter of Pulley 5 inches; Width of Pulley Face 1 1/4 inches; Length of Slide Rests, 1 each 9 and 5 inches; Height over all 16 1/4 inches; Diameter of Face Plate 4 1/2 inches; Weight each about 75 lbs. \$25.00
One in a Case.

WHEN IT IS POSSIBLE TO DO SO, CHUCKS SHOULD BE FITTED TO LATHES BEFORE BEING SHIPPED.

LATHE DOG WRENCHES.



Per Dozen

No. 3—Cast Steel, Natural Finish; Fits Screw Heads 3/8, 7/16, 1/2, 9/16, 5/8, 11/16 and 3/4 inches; Length 8 1/4 inches; Weight per dozen about 12 lbs. \$9.00
Packed Loose.

POLISHING LATHE HEADS.



Each

No. 2—Japanned Cast Iron Base and Frame; Polished Steel Axle Pulleys; Clamp, Chuck and Taper Threaded Spindle; Diameter of Spindle 3/8 inch; Height 6 1/4 inches; Length of Spindle 2 1/4 inches; Diameter of Pulley 1 1/4 inches; Length of Shaft over all 8 inches; Size of Base 3x3 inches; Weight each about 1 1/2 lbs. \$2.50
Packed Loose.

SCREW CHASERS.

Finest Tool Steel.



Inside Chaser.



Outside Chaser.

Per Pair

For Chasing Screws in the Lathe, by Hand, of the following Number of Threads to the inch

7	8	9	10	11	11 1/2	12
13	14	16	18	20	22	24

\$1.50

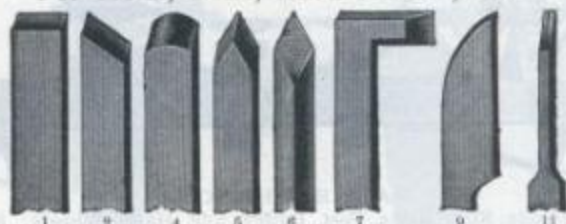
Weight per Pair about 8 ozs.

IF SINGLE CHASERS ARE WANTED, SPECIFY WHETHER INSIDE OR OUTSIDE WHEN ORDERING.
Packed Loose.



TURNING TOOLS.

For Metal, Bone, Hard Rubber, Etc.



Cast Steel, Polished; With Handles; All Tools are about 9 inches long over all without Handle.

	Per Dozen
No. 1—SQUARE POINTS, $\frac{1}{4}$ and $\frac{3}{8}$ inch; Weight per dozen about 2 lbs.	\$4.20
No. 2—SKEW POINTS, RIGHT HAND, $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{1}{2}$ inch; Weight per dozen about 3 lbs.	4.20
No. 3—SKEW POINTS, LEFT HAND, $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{1}{2}$ inch; Weight per dozen about 3 lbs.	4.20
No. 4—ROUND POINTS, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$ and $\frac{3}{4}$ inch; Weight per dozen about 4 lbs.	4.20
No. 5—SPEAR POINTS, $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{1}{2}$ inch; Weight per dozen about 3 lbs.	4.40
No. 6—SQUARE GRAVER, $\frac{1}{4}$ and $\frac{3}{8}$ inch; Weight per dozen about 2 lbs.	4.40
No. 7—INSIDE TOOL, RIGHT HAND; Weight per dozen about 3 lbs.	6.00
No. 8—INSIDE TOOL, LEFT HAND; Weight per dozen about 3 lbs.	6.00
No. 9—SIDE TOOL, RIGHT HAND; Weight per dozen about 3 lbs.	6.00
No. 10—SIDE TOOL, LEFT HAND; Weight per dozen about 3 lbs.	6.00
No. 11—CUTTING-OFF TOOL; Weight per dozen about 3 lbs.	6.00

One-half Dozen in a Cardboard Box.

SIZERS.

Wood Turners'.



Cast Steel Blades, Polished; Not Handled; Cast Iron Frame.

	Per Dozen
No. 25—Opens 4 inches; Weight per dozen about 13 lbs.	\$15.00

One-half Dozen in a Cardboard Box.

PARTING TOOLS.

Wood Turners'.



Cast Steel Polished; Not Handled; Length $8\frac{1}{2}$ to $9\frac{1}{2}$ inches over all.

No. 18.

Size, inches	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{4}$
Weight per dozen about, lbs.	2	2	$2\frac{1}{4}$
Per dozen	\$4.50	5.00	5.50

One-half Dozen in a Cardboard Box.

SLIDE REST LATHE TOOLS.

Forged from Finest Tool Steel, Natural Finish; Tempered Points; Average Length over all 5 inches.



Size, inches	$\frac{1}{4} \times \frac{1}{2}$	$\frac{5}{16} \times \frac{5}{8}$	$\frac{3}{8} \times \frac{3}{4}$
For Barnes' Lathes Nos.	93 and 95	97 to 115	135 to 141
No. 1—Cut-Off Tool, Each	\$0.30	.30	.40
No. 2—Right Hand Diamond Point, Each	.30	.30	.40
No. 3—Left Hand Diamond Point, Each	.30	.30	.40
No. 4—Right Hand Side Tool, Each	.30	.30	.40
No. 5—Left Hand Side Tool, Each	.30	.30	.40
No. 6—Thread Tool, Each	.30	.30	.40
No. 7—Bent Thread Tool, Each	.30	.30	.40
No. 8—Inside or Boring Tool, Each	.30	.30	.40
No. 9—Bent Right Hand Side Tool, Each	.30	.30	.40

All the Numbers illustrated are made in all the Three Sizes. The Numbers indicate the Shape. Packed Loose. Weight Each about $\frac{1}{4}$ lb.

TOOL HOLDERS.

ARMSTRONG.

For General Lathe and Planer Work.

Drop Forged from Steel, and Case Hardened; The Top and Bottom are Planed Square with the Size; The Hole for receiving the Cutter is Drilled and Squared from the Solid, insuring a Straight and True Seat; Set Screw is Tool Steel, with Tempered Point; Cutters made of Armstrong Special Self-hardening Steel, Unexcelled for General Use on various Metals under High Speed and Heavy Feeds.



STRAIGHT SHANK.

Each Tool complete with One Drop Forged Wrench and Two Cutters, Ground to Shape.

Nos.	Size of Holder, inches.	Size of Cutters, inches, Square.	Weight, each about, lbs.	Each.	Extra Cutters, Each.
00/S	$\frac{5}{16} \times \frac{5}{8} \times 4\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{2}$	\$1.60	\$0.10
0/S	$\frac{3}{8} \times \frac{3}{4} \times 5$	$\frac{1}{4}$	$\frac{3}{4}$	1.65	.12
1/S	$\frac{1}{2} \times 1 \times 6$	$\frac{5}{16}$	$1\frac{1}{4}$	1.80	.18
2/S	$\frac{5}{8} \times 1\frac{1}{4} \times 7$	$\frac{3}{8}$	2	2.30	.25
3/S	$\frac{3}{4} \times 1\frac{1}{2} \times 8$	$\frac{7}{16}$	$3\frac{1}{4}$	3.00	.35
4/S	$\frac{7}{8} \times 1\frac{3}{4} \times 9$	$\frac{1}{2}$	$4\frac{1}{2}$	3.80	.45
5/S	$1 \times 1\frac{1}{4} \times 11$	$\frac{5}{8}$	$7\frac{1}{2}$	4.75	.65
6/S	$1\frac{1}{4} \times 2 \times 13$	$\frac{3}{4}$	$11\frac{1}{2}$	7.00	1.00
7/S	$1\frac{1}{2} \times 2\frac{1}{4} \times 16$	$\frac{7}{8}$	20	12.00	1.75
750/S	$1\frac{5}{8} \times 2\frac{1}{2} \times 18$	1	25	17.50	2.50
800/S	$1\frac{3}{4} \times 2\frac{3}{4} \times 20$	$1\frac{1}{8}$	37	23.00	3.25



LEFT HAND OFFSET TOOL.



RIGHT HAND OFFSET TOOL.

OFF-SET SHANK.

No. Left Hand.	No. Right Hand.	Size of Holder, inches.	Size of Cutters, inches, Square.	Weight each about, lbs.	Each.	Extra Cutters, Each.
00L	00R	$\frac{5}{16} \times \frac{5}{8} \times 4\frac{1}{2}$	$\frac{3}{16}$	$\frac{1}{2}$	\$1.60	\$0.10
0L	0R	$\frac{3}{8} \times \frac{3}{4} \times 5$	$\frac{1}{4}$	$\frac{3}{4}$	1.65	.12
1L	1R	$\frac{1}{2} \times 1 \times 6$	$\frac{5}{16}$	$1\frac{1}{4}$	1.80	.18
2L	2R	$\frac{5}{8} \times 1\frac{1}{4} \times 7$	$\frac{3}{8}$	2	2.30	.25
3L	3R	$\frac{3}{4} \times 1\frac{1}{2} \times 8$	$\frac{7}{16}$	$3\frac{1}{4}$	3.00	.35
4L	4R	$\frac{7}{8} \times 1\frac{3}{4} \times 9$	$\frac{1}{2}$	$4\frac{1}{2}$	3.80	.45
5L	5R	$1 \times 1\frac{1}{4} \times 11$	$\frac{5}{8}$	$7\frac{1}{2}$	4.75	.65
6L	6R	$1\frac{1}{4} \times 2 \times 13$	$\frac{3}{4}$	$11\frac{1}{2}$	7.00	1.00
7L	7R	$1\frac{1}{2} \times 2\frac{1}{4} \times 16$	$\frac{7}{8}$	20	12.00	1.75
750L	750R	$1\frac{5}{8} \times 2\frac{1}{2} \times 18$	1	25	17.50	2.50
800L	800R	$1\frac{3}{4} \times 2\frac{3}{4} \times 20$	$1\frac{1}{8}$	37	23.00	3.25

One in a Cardboard Box.



TURNING TOOLS.

CUTTING-OFF TOOLS.**ARMSTRONG.**

Shank Drop Forged from Steel; Blade made of Self-hardening Steel, Tempered.

**STRAIGHT SHANK.**

Complete with One Drop Forged Wrench and One Blade.

No.	Size of Holder, inches.	Size of Blade, inches.	Weight each about, lbs.	Each.	Extra Blades, Each.
20	$\frac{5}{8}$ x $\frac{3}{4}$ x 5	$\frac{3}{32}$ x $\frac{5}{8}$ x $5\frac{1}{2}$	$\frac{3}{4}$	\$1.65	\$0.25
21	$\frac{1}{2}$ x $1\frac{1}{8}$ x 6	$\frac{1}{8}$ x $\frac{5}{8}$ x $6\frac{1}{2}$	$1\frac{1}{4}$	1.80	.35
22	$\frac{3}{8}$ x $1\frac{1}{2}$ x 7	$\frac{1}{8}$ x $\frac{7}{8}$ x $7\frac{1}{2}$	2	2.30	.45
23	$\frac{3}{4}$ x $1\frac{1}{2}$ x 8	$\frac{3}{16}$ x 1 x $8\frac{1}{2}$	$3\frac{1}{4}$	3.00	.60
24	$\frac{3}{8}$ x $1\frac{1}{2}$ x 9	$\frac{3}{16}$ x $1\frac{1}{2}$ x $9\frac{1}{2}$	$4\frac{1}{2}$	3.80	.75
25	1 x 2 x 10	$\frac{1}{4}$ x $1\frac{1}{4}$ x $10\frac{1}{2}$	$6\frac{1}{2}$	4.75	.95
26	$1\frac{1}{2}$ x $2\frac{1}{2}$ x 11	$\frac{1}{4}$ x $1\frac{1}{2}$ x $11\frac{1}{2}$	$8\frac{1}{4}$	6.50	1.25

**OFF-SET SHANK.**

Complete with One Drop Forged Wrench and One Blade.

No. Left Hand.	No. Right Hand.	Size of Holder, inches.	Size of Blade, inches.	Weight each about, lbs.	Each.	Extra Blades, Each.
	00C	$\frac{5}{16}$ x $\frac{3}{4}$	$\frac{3}{32}$ x $\frac{9}{16}$	$\frac{3}{4}$	\$1.65	\$0.25
30L	30R	$\frac{3}{8}$ x $\frac{3}{4}$	$\frac{3}{32}$ x $\frac{5}{8}$	1	1.65	.25
31L	31R	$\frac{1}{2}$ x $1\frac{1}{8}$	$\frac{1}{8}$ x $\frac{3}{4}$	$1\frac{1}{2}$	1.80	.35
32L	32R	$\frac{5}{8}$ x $1\frac{1}{2}$	$\frac{1}{8}$ x $\frac{7}{8}$	$2\frac{1}{2}$	2.30	.45
33L	33R	$\frac{3}{4}$ x $1\frac{1}{2}$	$\frac{3}{16}$ x 1	4	3.00	.50
34L	34R	$\frac{7}{8}$ x $1\frac{1}{2}$	$\frac{3}{16}$ x $1\frac{1}{8}$	$5\frac{1}{4}$	3.80	.75
35L	35R	1 x 2	$\frac{1}{4}$ x $1\frac{1}{4}$	$7\frac{1}{2}$	4.75	.95
36L	36R	$1\frac{1}{8}$ x $2\frac{1}{2}$	$\frac{1}{4}$ x $1\frac{3}{8}$	$9\frac{1}{2}$	6.50	1.25

One in a Cardboard Box.



SIDE TOOLS.

ARMSTRONG.

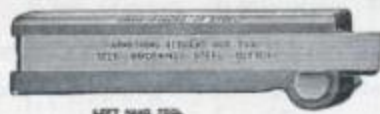
Shank Drop Forged from Tool Steel; Cutters made of Self-hardening Steel, Tempered.



STRAIGHT SHANK.

Complete with One Drop Forged Wrench and One Cutter Ground to Shape.

No. Left Hand.	No. Right Hand.	Size of Shank, inches.	Size of Cutter, inches.	Weight each about, lbs.	Each.	Extra Cutters, Each.
81L	81R	$\frac{1}{2} \times 1\frac{1}{2} \times 6$	$\frac{7}{32} \times \frac{5}{8} \times 6$	1 $\frac{1}{2}$	\$2.40	\$0.55
82L	82R	$\frac{3}{8} \times 1\frac{1}{4} \times 6$	$\frac{1}{4} \times \frac{3}{4} \times 6\frac{1}{2}$	1 $\frac{1}{2}$	3.00	.65
83L	83R	$\frac{3}{8} \times 1\frac{1}{2} \times 7\frac{1}{2}$	$\frac{5}{16} \times 1 \times 8$	2 $\frac{3}{4}$	3.90	1.15
84L	84R	1 x 1 $\frac{1}{4} \times 9$	$\frac{3}{8} \times 1\frac{1}{4} \times 9\frac{1}{2}$	5	4.90	1.35
85L	85R	1 $\frac{1}{2} \times 2 \times 11$	$\frac{7}{16} \times 1\frac{1}{2} \times 11\frac{1}{2}$	7 $\frac{1}{2}$	6.50	1.85
86L	86R	1 $\frac{1}{2} \times 2\frac{1}{2} \times 13$	$\frac{1}{2} \times 1\frac{1}{2} \times 13\frac{1}{2}$	11	8.50	2.50
87L	87R	1 $\frac{1}{2} \times 2\frac{3}{4} \times 15$	$\frac{9}{16} \times 1\frac{1}{2} \times 15\frac{1}{2}$	16	12.00	3.75



LEFT HAND TOOL.



RIGHT HAND TOOL.

OFF-SET SHANK.

Complete with One Drop Forged Wrench and One Cutter Ground to Shape.

No. Left Hand.	No. Right Hand.	Size of Shank, inches.	Size of Cutter, inches.	Weight each about, lbs.	Each.	Extra Cutters, Each.
70L	70R	$\frac{3}{8} \times \frac{3}{8}$	$\frac{7}{32} \times \frac{5}{8} \times 4\frac{1}{2}$	$\frac{5}{8}$	\$2.20	\$0.45
71L	71R	$\frac{1}{2} \times 1\frac{1}{2}$	$\frac{1}{4} \times \frac{3}{4} \times 5$	1 $\frac{1}{2}$	2.40	.50
72L	72R	$\frac{5}{8} \times 1\frac{1}{2}$	$\frac{5}{16} \times 1 \times 6$	2 $\frac{3}{4}$	3.00	.75
73L	73R	$\frac{3}{4} \times 1\frac{1}{2}$	$\frac{3}{8} \times 1\frac{1}{4} \times 7$	4	3.90	1.15
74L	74R	$\frac{7}{8} \times 1\frac{1}{2}$	$\frac{7}{16} \times 1\frac{1}{2} \times 8$	5 $\frac{3}{4}$	4.90	1.35
75L	75R	1 x 2	$\frac{1}{2} \times 1\frac{1}{2} \times 9$	8 $\frac{1}{2}$	6.50	1.85
76L	76R	1 $\frac{1}{2} \times 2\frac{1}{4}$	$\frac{9}{16} \times 1\frac{1}{2} \times 10$	12 $\frac{1}{2}$	8.50	2.50

One in a Cardboard Box.



THREADING TOOLS.



ARMSTRONG.

Shank Drop Forged from Steel and Case-hardened. Cutter requires grinding on top edge only to sharpen and, therefore, always remains True to Form and of Correct Angle, insuring Perfect Fitting Threads. Cutters are backed off to afford proper Clearance. Back of Cutter is Eccentric in form and bears upon a Hardened Stop Screw which allows a Positive and Accurate Adjustment.

Each Tool Complete with One Single Point Cutter and a Drop Forged Wrench.

No.	Size of Shank, inches.	Weight each about, lbs.	Price complete with V or U. S. Standard Cutter.	Price complete with Whitworth Cutter.
00T	$\frac{5}{16} \times \frac{3}{8} \times 5$	$1\frac{1}{2}$	\$2.25	\$2.50
50	$\frac{3}{8} \times \frac{3}{8} \times 5$	$\frac{3}{4}$	2.25	2.50
51	$1/2 \times 1 \times 6$	$1\frac{1}{2}$	2.75	3.10
52	$\frac{5}{8} \times 1\frac{1}{4} \times 7$	$2\frac{3}{4}$	3.50	4.00
53	$\frac{3}{4} \times 1\frac{1}{2} \times 8$	$3\frac{1}{2}$	4.50	5.00
54	$\frac{7}{8} \times 1\frac{3}{4} \times 9$	4	5.50	6.00
55	$1 \times 1\frac{3}{4} \times 10$	6	7.00	7.70

One in a Cardboard Box.

NOTE.—In ordering Tools equipped with the U. S. or Whitworth Cutters, always SPECIFY NUMBER OF THREADS TO THE INCH WANTED. Tools equipped with Single Point, Sharp V Cutter will always be sent unless otherwise specified.

EXTRA CUTTERS.

For Tool No.	00T and 50.		51.		52.		53 and 54.		55.
Shape of Thread.	Single Point.	Chaser.	Single Point.	Chaser.	Single Point.	Chaser.	Single Point.	Chaser.	Single Point only.
Sharp V, Each.	\$0.45	\$0.90	\$0.55	\$1.05	\$0.70	\$1.20	\$0.90	\$1.30	\$1.25
U. S. Std., Each.	.50	.90	.60	1.05	.75	1.20	.95	1.30	1.35
Whitworth, Each.	.75	1.25	.90	1.40	1.15	1.65	1.40	1.80	1.95

Packed Loose.

NOTE.—When ordering Cutters for U. S. or Whitworth Standard, it is necessary to SPECIFY EXACT PITCH FOR NUMBER OF THREADS TO THE INCH.



PLANER TOOLS.

ARMSTRONG.



Shank Drop Forged from Steel and Case-hardened; Cutters made of Self-hardening Steel, Rectangular in shape; Cutters Adjustable to Any Desired Angle. Each Tool complete with a Drop Forged Wrench and Two Cutters Ground to Shape.

Nos.	Size of Shank, inches.	Length, inches.	Size of Cutter, inches.	Weight each about, lbs.	Each.	Extra Cutters, Each.
40	$\frac{1}{2} \times 1$	7	$\frac{1}{4} \times \frac{3}{8}$	2	\$2.75	\$0.20
401	$\frac{3}{8} \times 1\frac{1}{4}$	8 $\frac{1}{2}$	$\frac{5}{16} \times \frac{7}{16}$	3	3.50	.30
41	$\frac{3}{8} \times 1\frac{1}{2}$	10	$\frac{3}{8} \times \frac{1}{2}$	4 $\frac{1}{4}$	4.50	.40
42	$1\frac{1}{4} \times 1\frac{3}{4}$	13	$1\frac{1}{2} \times \frac{3}{4}$	10 $\frac{1}{2}$	7.00	.70
43	$1\frac{1}{2} \times 2$	16	$\frac{5}{8} \times \frac{7}{8}$	18 $\frac{3}{4}$	11.00	1.00
44	$1\frac{3}{4} \times 2\frac{1}{4}$	19	$\frac{3}{4} \times 1$	32 $\frac{1}{2}$	16.00	2.00
45	$2\frac{1}{4} \times 2\frac{3}{4}$	22	$\frac{7}{8} \times 1\frac{1}{8}$	50	25.00	3.00

BORING TOOLS.

ARMSTRONG.



Made entirely of Steel, Wearing Parts Hardened; Bar can be Extended from its Holder to any desired Length to suit Depth of Hole; Cutters made of Self-hardening Steel, and can be Ground for V or Square Thread, Double End, Round Nose, or Any Desired Shape.

Each Set consists of Holder and Bar with Straight and 45 Degree End Caps, Two Cutters (Ground for Boring) and a Double End Wrench.

Nos.	Size of Shank, inches.	Size of Bar, Diam., inches.	Size of Cutters, inches, Square.	Weight each about, lbs.	Each.	Extra Cutters, Each.
00B	$\frac{5}{16} \times \frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{16}$	1 $\frac{1}{2}$	\$3.00	\$0.12
8	$\frac{3}{8} \times \frac{3}{4}$	$\frac{5}{16}$	$\frac{3}{16}$	2	3.00	.12
9	$\frac{1}{2} \times 1$	$\frac{3}{4}$	$\frac{1}{4}$	4	3.60	.15
10	$\frac{5}{8} \times 1\frac{1}{4}$	$\frac{15}{16}$	$\frac{5}{16}$	7 $\frac{1}{4}$	4.75	.20
11	$\frac{3}{4} \times 1\frac{1}{2}$	$1\frac{1}{8}$	$\frac{3}{8}$	12 $\frac{1}{4}$	6.75	.30
12	$\frac{7}{8} \times 1\frac{3}{4}$	$1\frac{5}{16}$	$\frac{7}{16}$	17 $\frac{1}{4}$	10.00	.40
13	$1 \times 1\frac{1}{4}$	$1\frac{1}{2}$	$\frac{1}{2}$	26	14.00	.50

KNURLING TOOLS

ARMSTRONG.



Drop Forged from Bar Steel, Hardened; Knurls and Pins are Accurately made of Tool Steel, Suitably Tempered. Ample Bearing to resist severe strains of both End and Side Thrusts. Self-Centering.

No. 1K—Size of Shank $\frac{1}{2} \times 1\frac{1}{4}$ inches; Weight each about 1 $\frac{1}{4}$ lbs.	Each
Extra Knurls for No. 1K Knurling Tool.....	\$4.50
	Per Pair
	\$0.75

One in a Cardboard Box.



LATHE DOGS.



Malleable Iron.

Natural Finish Malleable Iron Frame, with Steel Screw.

Nos.	1M	2M	3M	4M	5M	6M
Length of opening, in...	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Length over all, in....	4 $\frac{1}{2}$	5	5 $\frac{1}{2}$	6	6 $\frac{1}{2}$	7
Wgt. each about, lbs....	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Each.....	\$0.30	.30	.40	.40	.60	.60
Nos.	7M	8M	9M	10M	11M	12M
Length of opening, in...	$1\frac{1}{4}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Length over all, in....	7 $\frac{1}{2}$	8 $\frac{1}{2}$	9 $\frac{1}{2}$	10 $\frac{1}{2}$	11 $\frac{1}{2}$	12 $\frac{1}{2}$
Wgt. each about, lbs....	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4 $\frac{1}{4}$	5
Each.....	\$0.90	1.00	1.20	1.30	1.40	1.60



Amateur's.

Natural Finish Cast Steel Frame and Screw to be used with Barnes' Lathes Nos. 93 and 97. (See Page 299.)

Nos.	1A	2A	3A	4A
Length of opening, inches.....	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1
Length over all, inches.....	3	$3\frac{1}{4}$	$3\frac{1}{2}$	$3\frac{3}{4}$
Weight each about, lbs.....	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1
Each.....	\$0.30	.35	.45	.50



Steel.

Natural Finish Cast Steel Frame and Screw.

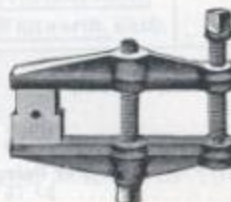
Nos.	1	2	3	4	5	6	7	8	9	10
Length of opening, inches.....	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{1}{2}$
Length over all, inches.....	3 $\frac{3}{4}$	4	4 $\frac{1}{2}$	4 $\frac{3}{4}$	5	5 $\frac{1}{2}$	6	6	6 $\frac{1}{2}$	6 $\frac{1}{2}$
Weight each about, lbs.....	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Each.....	\$0.40	.50	.60	.60	.70	.70	.80	.80	.95	.95
Nos.	11	12	13	14	15	16	17	18	19	
Length of opening, inches.....	$1\frac{1}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{3}{4}$	3	4	$4\frac{1}{4}$	5	
Length over all, inches.....	6 $\frac{1}{2}$	7	8	8 $\frac{1}{4}$	8 $\frac{3}{4}$	10	11	11 $\frac{1}{2}$	11 $\frac{1}{2}$	
Weight each about, lbs.....	$2\frac{1}{4}$	$2\frac{1}{2}$	3	$3\frac{1}{4}$	4	5	7	$7\frac{1}{2}$	8	
Each.....	\$1.10	1.20	1.35	1.45	1.60	1.80	2.10	2.75	3.25	

CLAMPS.

TOOL MAKERS'.

Steel, Case-hardened, Mottled Finish. The Clamps are designed to insure Great Strength and Rigidity. The Jaws are Rounded on the ends to allow clamping under a shoulder or recess. The Screws are of Comparatively Fine Pitch to give Ample Leverage and fit the Jaws Tight enough to insure Rigidity.

No.	Length of Jaws, inches.	Jaws Open, inches.	Weight per dozen, "Tool, lbs.	Per Dozen.
No. 840	$1\frac{1}{2}$	$\frac{3}{8}$	1	\$5.40
No. 841	$2\frac{1}{4}$	1	$2\frac{1}{4}$	6.00
No. 842	$2\frac{3}{4}$	$1\frac{1}{4}$	$4\frac{1}{4}$	7.80
No. 843	3 $\frac{1}{4}$	$1\frac{3}{4}$	6 $\frac{3}{4}$	9.00
No. 844	4	2 $\frac{1}{2}$	10	12.00

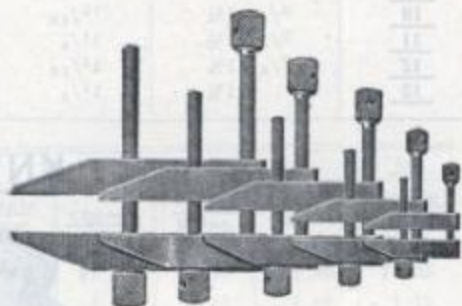


STEEL MACHINISTS'.

Drop Forged Steel; Tool Steel Screws, Case-hardened.

	Opens, inches.	Length over all, inches.	Weight each about, lbs.	Each.
No. 1	$1\frac{1}{4}$	4	$\frac{5}{8}$	\$1.50
No. 2	$2\frac{1}{4}$	5	1	2.00
No. 3	$3\frac{1}{4}$	6	2	2.50
No. 4	$4\frac{1}{4}$	7	3	3.00

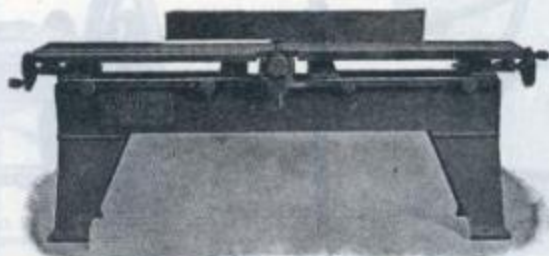
Packed Loose.



MT



OLIVER HAND PLANER AND JOINTER.



This Machine has Heavy Bed and End Legs, giving Operator Ample Foot Room. Vibration is eliminated. Tables are Strong, Well Ribbed and Machined True. Table Slides are Dovetailed into the Bed and Adjust Instantly. Steel Lips to the Tables next the cut. May be renewed when worn or nicked. Cylinder is of forged Steel with Journals Machine Ground, and carries Two Long Knives regularly.

OPERATOR CANNOT LOSE HIS FINGERS ON THIS MACHINE.

Because it carries a Circular Safety Cylinder.

The Cylinder Bearings are Babbitted Properly, have Oil Chambers and are the Correct Length. An Adjustable Fence is supplied, which tilts to 45 Degrees. Has Countershaft.

The machine is made to plane 12, 16, 20 and 24 inches wide, and Tables will lower to cut 1 inch deep.

General Dimensions:

BED—84 inches Long, 34 inches High, 9 inches Deep; Width, according to size of Machine.

TABLES—Each section 42 inches Long, and in Width 2 inches more than Machine will Plane. Draw away from the Cylinder 18 inches either end. Vertical Adjustment, 1 inch.

CYLINDER—Journals $1\frac{1}{4}$ inches in Diameter, Main Bearing 8 inches Long, Front Bearing 6 inches Long, Cutting Diameter $4\frac{1}{2}$ inches, Square $3\frac{1}{2}$ inches; Pulley 4 inches Diameter, $5\frac{1}{2}$ inch Face; Speed 4200 R. P. M.

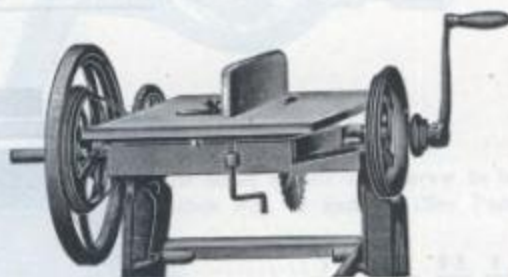
FENCE—Length 4 feet, Width 5 inches, Bevels 45 inches. Permits full Width of Table to be used.

COUNTERSHAFT—Length $3\frac{1}{2}$ feet, Diameter $1\frac{1}{2}$ inches, Hangers 14 inch drop, Bearings 6 inches Long, Tight and Loose Pulleys 10 inches Diameter, 6 inch Face; Driving Pulley 20 inches Diameter, $5\frac{1}{2}$ inch Face; Speed 800 R. P. M.

HORSE-POWER—3 to 5, according to width.

	Size, inches.	Net weight, lbs.	Crated, weight.	Each.
No. 12	12	1200	1400	\$350.00
No. 16	16	1400	1600	400.00
No. 20	20	1600	1900	450.00
No. 24	24	1900	2250	500.00

One in a Crate.

*CIRCULAR RIP SAWS.

Showing No. 11 Circular Rip Saw with the Front Table Placed Directly over the Saw.

BARNES', HAND.

Each

±No. 11—Painted Cast Iron Frame, Fly and Gear Wheels, Crank and Idler; Steel Axles and Shafts; Polished and Tempered Tool Steel Saws; for Ripping Hard or Soft Wood of any Thickness up to $3\frac{3}{4}$ inches, and any width up to 19 inches; Fitted with Two Rollers which feed the Lumber to the Saw; Rollers are Self-Adjusting to thick or thin Lumber by means of the Idler; Two Hardwood Tables; The Front Table can be placed directly over the Saw and, being provided with an Adjustable Width Gauge, can be used for cutting Rabbits, Bevels, Tenons, etc.; By using Two Saws side by side, Grooving, Window or Door Stop Work can be done; An extra Saw is furnished for this purpose; Diameter of Fly Wheel 18 inches, $1\frac{3}{8}$ inches thick at Rim; Diameter of Saws 10 inches; Height to Top of Table 25 inches; Height over all 43 inches; Width over all 31 inches; Length over all, including Two Tables, 79 inches; Weight each about 190 lbs.; Weight boxed about 275 lbs. \$40.00

Packed in Two Cases.

CIRCULAR SAWS.

BARNES', CIRCULAR.

Each

No. 4—Painted Iron Frame and Gear; Complete with Self-Feed, with TWO 10 INCH CIRCULAR SAWS (one each Rip and Cross-Cut); Height over all 36 inches; Floor Space required 36x34 inches; Length over all with Extensions, 90 inches. \$60.00
Weight Boxed for Shipment about 400 lbs.

Packed One in a Crate.

It is a Combined Foot and Hand Power Circular Saw, which can be used for Rip or Cross Cut Sawing; the Self-Feed can be Regulated properly for hard or soft, thick or thin Lumber, and is Self-adjusting for lumber of different or uneven thickness; Lumber up to $3\frac{1}{2}$ inches can be Ripped with the 10-inch Saw.

The Self-Feeding Mechanism can be instantly thrown back to the rear of the Machine, as also the Rip Gauge, leaving the Table perfectly clear for Cut-off Work; The Cut-off Gauge can be set at any required angle.

The Speed can be regulated to give High Speed for Cross-Cut Work or a Slower Speed for Ripping.

*FOOT POWER FORMERS.

BARNES', IMPROVED.

Each

±No. 29—WITHOUT KNIVES: Painted Cast Iron Frame, Seat, Gear Wheels, Cranks and Pedals; Steel Axles and Shaft; Plain Finish Hardwood Table; Size of Table $15 \times 19\frac{1}{2}$ inches; Floor Space required 20x28 inches; Height over all 42 inches; Adapted for Moulding Edges of Brackets, Scroll Work, Panel Work and Mouldings of all Styles up to $\frac{7}{8}$ inch; the Speed of the Knives is from 2000 to 2500 Revolutions per minute; the Knives can be revolved in either direction; Table can be lowered to give $2\frac{1}{2}$ inch Space between it and the Lower Edge of Knife. \$20.00

Weight Boxed for Shipment about 110 lbs.

MORTISING MACHINES.

BARNES'.

± No. 33—Complete with one Mortising Chisel each, Sizes $\frac{1}{4}$, $\frac{3}{8}$ and $\frac{1}{2}$ inch; Painted Cast Iron Frame, Legs and Bed; Steel Foot Lever Plunger and Set Screws; Hardwood Bed Face; Length of Bed 22 inches; Length of Bed Face 39 inches; Floor Space required 27x27 inches; Height over all 53 inches...\$23.00

Weight Boxed for Shipment about 170 lbs.

One in a Case.

MORTISING MACHINE CHISELS.



BARNES'.

Forged from Finest Tool Steel; Polished Blade; Natural Finish Shank; Length 6 inches. Fits Barnes' Mortising Machine No. 33.

Sizes	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
Each	\$1.00	1.00	1.00	1.00	1.00
Sizes	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
Each	\$1.00	1.00	1.00	1.00	1.00

Weight Each about 5 ozs.; Packed Loose.

COMBINED MACHINES.

BARNES', IMPROVED.

Each

No. 13—Painted Iron Frame and Gear; CIRCULAR SAWS ONLY, including 2 Circular Saws, 1 Rip and 1 Cross-Cut; Height over all 37 inches; Floor Space required 28x30 inches; Weight Boxed for Shipment about 335 lbs... \$35.00

No. 15—Painted Iron Frame and Gear; COMBINED CIRCULAR AND SCROLL SAWS, including 2 Circular Saws and 12 Assorted Scroll Saws; Height over all 37 inches; Floor Space required 28x30 inches; Weight Boxed for Shipment about 335 lbs..... 40.00

No. 17—Painted Iron Frame and Gear; COMBINED CIRCULAR, SCROLL SAWS AND BORING ATTACHMENTS, including 2 Circular Saws, 12 Assorted Scroll Saws, the Boring Attachment with Self-Centering Drill Chuck, all combined in one Machine; Height over all about 37 inches; Floor Space required 28x30 inches; Weight Boxed for Shipment about 375 lbs. 50.00

When either the Circular Saw, Scroll Saw or Boring Machine is ordered separate, the other Parts can be furnished, if the Number of the Machine is given.

For Light Ripping, Cutting to Length, Cut-off Work, etc., the Circular Saw of the Combined Machine is invaluable.

The Circular Saw, while remaining on its Mandrel, can be taken at once out of the way when the Scroll Saw is to be used; The Mandrel is set in its Bearing in such a manner as to enable the operator to take the whole (Mandrel and Saw) from the Machine in an instant.

All Varieties of Joint Work can be done truly and rapidly. The Table can be handily Adjusted up or down by a Cam, to allow any desired Depth of Cut being made by the Saws or Cutter Tools; The Circular Saws are Six inches in Diameter, and Reach $1\frac{1}{2}$ inches above the Table; A Seven or Eight inch Saw can be used if desired.

Emery Wheels, in size up to One inch Face by Six inches in Diameter, can be used to good advantage on this Machine.

Packed in Two Cases.



MOULDERS' TOOLS.

Made of Best Tool Steel, Polished. White Birch Handle.



No. 3—Heart Trowels.

Width, inches	2	2½	2¾	3
Length over all, inches	5¼	7	7½	8
Weight each about, ozs.	3	3½	3¾	4½
Each	\$0.60	.75	.85	1.00



No. 5—Heart and Leaf.

Width, inches	1	1¼	1½
Length over all, inches	6¼	8	8¾
Weight each about, ozs.	1	1½	2
Each	\$0.50	.60	.70



No. 1—Finishing Trowels.

Length, inches	5	5½	6	6½	7
Width 1¼ inches, each	\$0.60	.65	.70	...	...
Width 1½ inches, each	.70	.75	.80	.85	.95
Width 1¾ inches, each	.80	.85	.90	.95	1.05

Packed Loose; Weight runs from 3 ozs. on the 1 by 4 to 6½ ozs. on the 2 by 7.



No. 4—Heart and Square.

Width, inches	3/4	1	1¼	1½	1¾	2
Length over all, inches	5¼	6¼	7½	8½	8¾	9¼
Weight each about, ozs.	½	1¼	1½	2	2	3
Each	\$0.45	.50	.60	.70	.80	.90



No. 0—Square Trowels.

Length, inches	4¼	5	5½	6	6½	7
Width 1 inch, each	\$0.50	.55	.60	.65	...	...
Width 1¼ inches, each	.55	.60	.65	.70	...	...
Width 1½ inches, each	.65	.70	.75	.80	.85	.95
Width 1¾ inches, each	...	.80	.85	.90	.95	1.05
Width 2 inches, each	...	.90	.95	1.00	1.05	1.15



No. 2—Finishing Trowels.

MT



MOULDERS' TOOLS.

Made of Best Tool Steel, Polished.



No. 6—Heart and Square Spoon.

Width, inches	1	1 1/4	1 1/2
Length over all, inches	6 1/2	6 3/4	8
Weight each about, ozs.	1	1 1/2	2
Each	\$0.50	.60	.70



No. 7—Heart and Oval Spoon.

Width, inches	3/4	1	1 1/4	1 1/2
Length over all, inches	5 1/2	6 1/2	8	8 1/2
Weight each about, ozs.	1/2	1	1 1/2	2
Each	\$0.45	.50	.60	.70



No. 8—Taper and Square.

Width, inches	3/4	1	1 1/4	1 1/2
Length over all, inches	5 1/2	6 1/2	8	8 1/2
Weight each about, ozs.	1/2	1	1 1/2	2
Each	\$0.45	.50	.60	.70



No. 12—Slick and Oval Spoon.

Width, inches	3/4	1	1 1/4	1 1/2
Length over all, inches	6 1/2	7 1/2	8 1/2	8 3/4
Weight each about, ozs.	1	1 1/2	1 1/2	2
Each	\$0.45	.50	.60	.70



No. 13A—Spoons.

Width, inches	1	1 1/4	1 1/2
Length over all, inches	6 1/2	6 3/4	7
Weight each about, ozs.	1	1 1/2	1 3/4
Each	\$0.50	.60	.70



No. 13B—Spoons.

Packed Loose.



MOULDERS' TOOLS.

Made of Best Tool Steel, Polished.



No. 14—Taper and Square.

Width, inches	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Length over all, inches	$6\frac{1}{2}$	$7\frac{1}{2}$	$8\frac{1}{2}$	9
Weight each about, ozs.	1	$1\frac{1}{2}$	$1\frac{1}{2}$	2
Each	\$0.45	.50	.60	.70



No. 15—Spoon and Gate Cutter.

Width, inches	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Length over all, inches	7	$7\frac{1}{2}$	$7\frac{3}{4}$
Weight each about, ozs.	1	1	$1\frac{1}{2}$
Each	\$0.50	.60	.70



No. 16—Double Square.

Width, inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1
Length over all, inches	$6\frac{1}{2}$	$7\frac{1}{2}$	8	9
Weight each about, ozs.	$\frac{3}{4}$	1	$1\frac{1}{2}$	2
Each	\$0.50	.55	.60	.65



No. 11—Taper and Oval Spoon.

Width, inches	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Length over all, inches	6	$6\frac{3}{4}$	8	$8\frac{1}{2}$
Weight each about, ozs.	$\frac{3}{4}$	1	$1\frac{1}{2}$	2
Each	\$0.45	.50	.60	.70



No. 18—Flute Slick.

Width, inches	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{7}{8}$
Length over all, inches	$7\frac{1}{2}$	8	$8\frac{1}{2}$
Weight each about, ozs.	1	$1\frac{1}{2}$	2
Each	\$0.50	.60	.70



No. 20—Slick and Bead.

Width, inches	$\frac{3}{4}$	1
Length over all, inches	$6\frac{3}{4}$	$8\frac{1}{4}$
Weight each about, ozs.	$\frac{3}{4}$	$1\frac{1}{2}$
Each	\$0.50	.55

Packed Loose.

MT



MOULDERS' TOOLS.

Made of Best Tool Steel, Polished.



No. 24—Bead Slick.

Width, inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$
Length over all, inches	$6\frac{1}{2}$	8	$8\frac{3}{4}$
Weight each about, ozs.	1	$1\frac{1}{2}$	$1\frac{3}{4}$
Each	\$0.50	.55	.60



No. 26—Stove.

Width, inches	$\frac{5}{8}$	$\frac{3}{4}$
Length over all, inches	$5\frac{1}{2}$	6
Weight each about, ozs.	$\frac{1}{2}$	$\frac{3}{4}$
Each	\$0.40	.45



No. 25—Stove.

Width, inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1
Length over all, inches	7	$7\frac{3}{4}$	8	$8\frac{3}{4}$	10
Weight each about, ozs.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2
Each	\$0.45	.50	.55	.60	.65



Oval Stove.

No. 29—Width $\frac{1}{2}$ inch; Length over all $5\frac{1}{2}$ inches;	Each
Weight each about $\frac{1}{2}$ oz.	\$0.45



Leaf Stove.

No. 30—Width $\frac{1}{2}$ inch; Length over all $6\frac{1}{2}$ inches; Weight each about 1 oz.	Each
	\$0.45



No. 31A—Yankee Slicks.



No. 31B—Yankee Slicks.

These Tools furnished with HEELS DOWN, to the RIGHT OR LEFT, AS ORDERED. When not specified, will send with heels down, as shown in cuts.

Width, inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1
Length over all, inches	$6\frac{1}{2}$	$6\frac{3}{4}$	$8\frac{1}{4}$	9	10
Weight each about, ozs.	$\frac{1}{2}$	1	1	$1\frac{1}{2}$	$2\frac{1}{2}$
Each	\$0.45	.50	.55	.60	.70

Packed Loose.



MOULDERS' TOOLS.

Made of Best Tool Steel, Polished.



No. 32B—Bench Lifters.

	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$
Width, inches	6	6	6½	7	8
Length over all, inches	½	½	½	1	1½
Weight each about, ozs.	\$0.35	.45	.50	.55	.60
Each					



No. 35—Flat and Circular Flange.

	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1
Width, inches	16	16	16	16
Length over all, inches	2	3	4	4½
Weight each about, ozs.	\$0.90	1.00	1.10	1.30
Each				



No. 36—Flange and Bead.

	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1
Width, inches	16	16	16	16
Length over all, inches	2	3	4	4½
Weight each about, ozs.	\$0.80	.90	1.00	1.20
Each				



No. 38—Flange Lifter.

Size, inches	$\frac{1}{2} \times 14$	$\frac{1}{2} \times 16$	$\frac{3}{4} \times 14$	$\frac{3}{4} \times 16$	$\frac{3}{4} \times 14$	$\frac{3}{4} \times 16$	$\frac{3}{4} \times 18$	1x16	1x18	1x20
Each	\$1.05	1.10	1.10	1.15	1.15	1.20	1.25	1.30	1.35	1.40



No. 39—Hub Lifter.

Size, inches	$\frac{1}{2} \times 12$	$\frac{1}{2} \times 14$	$\frac{1}{2} \times 16$	$\frac{3}{4} \times 14$	$\frac{3}{4} \times 16$	$\frac{3}{4} \times 18$	1x16	1x18	1x20
Each	\$0.65	.70	.75	.80	.85	.90	.95	1.00	1.05

Weight ranges from 2½ ozs. on $\frac{1}{2} \times 14$ to 6½ ozs. on 1x20.
Packed Loose.

MOULDERS' TOOLS.

Made of Best Tool Steel, Polished.



No. 41—Lifter.

Length, inches	10	12	14	16	18	20
Width $\frac{1}{4}$ inch	\$0.40	.45	.50	.55	...	...
Width $\frac{3}{8}$ inch	.45	.50	.55	.60	...	...
Width $\frac{1}{2}$ inch	.50	.55	.60	.65	...	...
Width $\frac{3}{4}$ inch	.55	.60	.65	.70	.75	...
Width $\frac{7}{8}$ inch	...	.65	.70	.75	.80	...
Width $\frac{15}{16}$ inch	...	.70	.75	.80	.85	.90
Width 1 inch	...	...	.85	.90	.95	1.00

Weight ranges from $\frac{1}{2}$ oz. on $\frac{1}{4}$ x10 to $6\frac{1}{2}$ ozs. on 1x20.



No. 42—Box Lifter.

Size, inches	$\frac{5}{8}$ x14	$\frac{5}{8}$ x16	$\frac{5}{8}$ x18	$\frac{3}{4}$ x16	$\frac{3}{4}$ x18	$\frac{3}{4}$ x20
Each	\$1.10	1.15	1.20	1.20	1.25	1.30

Weight ranges from 3 ozs. on the $\frac{5}{8}$ x14 to $6\frac{1}{2}$ ozs. on the $\frac{3}{4}$ x20.



No. 43—Square Corner Slick.

Size, inches	$1\frac{1}{2}$ x2	$1\frac{1}{2}$ x2 $\frac{1}{2}$	$1\frac{1}{2}$ x3
Each	\$0.60	.65	.70

Weight Each about 2 ozs.



No. 44—Inside Square Corner Slick.

Size, inches	$1\frac{1}{2}$ x2	$1\frac{1}{2}$ x2 $\frac{1}{2}$
Each	\$0.75	.80



No. 45—Half Round Corner Slick.

Width, inches	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
Weight about, ozs.	1	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{1}{2}$
Each	\$0.50	.55	.60	.65



No. 46—Pipe Slick.

Size, inches	$1\frac{1}{2}$ x3
Weight about, ozs.	1
Each	\$0.50



No. 47—Egg Slick.

Size, inches	$1\frac{1}{2}$ x2 $\frac{1}{2}$
Weight about, ozs.	1
Each	\$0.50

Packed Loose.



No. 48—Button Slick.

Size, inches	2	$2\frac{1}{2}$
Weight about, ozs.	1	$1\frac{1}{2}$
Each	\$0.50	.50

STEEL WIRE CASTING OR CLEANING BRUSHES.

Moulders'. $8\frac{1}{2}$ Inches Long; Hardwood Block.

Nos.	323	323	324	424	524	425	525	426
Rows wide	2	3	3	4	5	4	5	4
Rows long	12	12	12	12	12	12	12	12
Length exposed, inches	2	3	4	4	4	5	5	6
Per dozen	\$3.25	4.00	4.50	6.00	6.50	6.75	7.50	7.75

NOTE.—STATE WHETHER FINE OR COARSE WIRE IS WANTED.
Average Weight per Dozen 14 lbs.

BRUSHES.



No. 1.

No. 2.
Moulders'.

No. 3.

Selected Russia Bristles, Wire Drawn; Hardwood Block.

	Per Dozen
No. 1—14 inches Long; Bristles 4 inches Long; Weight per dozen about 8 lbs.	\$15.00
No. 2—14 inches Long; Bristles 4 inches Long; Weight per dozen about 8 lbs.	9.00
No. 3—14 inches Long; Bristles 4 inches Long; Weight per dozen about 8 lbs.	9.00

RELIANCE STEEL WIRE BRUSHES.



Complete.



Complete Section or Filler.

MOULDERS'.

Suitable for Cleaning all kinds of Castings; Can be used on an Ordinary Emery Grinder.

Complete, Including Metal Hubs.

	Diameter, inches.	Width of Face, inches.	Each.
No. 50	15	2½	\$15.00
No. 53	12	2	13.50
No. 54	10	1½	12.00
No. 55	8	1½	10.50

Weight Each about 10 lbs.

Sections or Fillers for Steel Wire Brushes.

	For Brush No.	Sections Per Set.	Per Set.
No. 3314	50	6	\$7.50
No. 3411	53	5	6.50
No. 358	54	5	6.00
No. 365	55	4	5.50

Weight per Set about 5 lbs.

NOTE.—Brushes Nos. 50, 53 and 54 are regularly made for Arbors $1\frac{1}{2}$ inches and Smaller. No. 55 for Arbors 1 inch and Smaller. For Larger Size Arbors there will be an Additional Cost. ALWAYS SPECIFY SIZE OF ARBOR FOR WHICH BRUSH IS WANTED.

Packed Loose.

MOULDERS' SWABS.



Per Dozen
No. 17H—HEMP; 24 inches Long;
 Weight per dozen about
 2 lbs. \$2.00
No. 17F—FLAX; 24 inches Long;
 Weight per dozen about
 2 lbs. 2.75

FLOOR RAMMERS.

Complete.



Per Dozen
No. 77—4 feet 6 inches Long; Polished Iron Butts and Peans;
 Hickory Handle; Weight per dozen about 90 lbs. \$20.00

BENCH RAMMERS.

Moulders' Hardwood.



Per Pair
No. 78—Made of very best Hardwood, Well Seasoned and Oiled; 13 inches Long, with 4 inch Butts; Weight per pair about 2½ lbs. \$2.00

BRASS PARTING SAND RIDDLES.



Per Dozen
No. 97—Wood Rim; 18 inches in Diameter; 4 inches Deep; 20 to 26 mesh Brass Wire;
 Weight per dozen about 40 lbs. \$36.00

Packed Loose.

FOUNDRY SPRINKLING CANS.



Per Dozen
No. 80—Made of Galvanized Iron, with Double Bottoms and are Very Strong; Capacity 14 quarts; 12½ inches High; Length of Spout 14 inches; Weight per dozen about 50 lbs. \$30.00

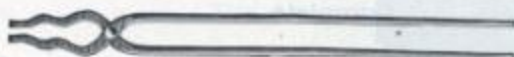
MOULDERS' SPRAY CANS.



Per Dozen
No. 105B—BRASS; 3½ inches High; Weight per dozen about 6 lbs. \$18.00
No. 105T—ENAMELED TIN; 3½ inches High;
 Weight per dozen about 6 lbs. 9.00

PICK-UP TONGS.

Brass Moulders'.



Steel, Hand Made; Plain Finish.

No. 220—Length 4 feet; Weight each about 8 lbs. Each \$10.00

MORTARS AND PESTLES.

Cast Iron.

- No. 8—Capacity 1 Gallon; Diameter over Top 9½ inches; Depth Inside, 9 inches..... \$15.00
- No. 9—Capacity 2 Gallons; Diameter over Top 11 inches; Depth Inside, 8 inches..... 20.00
- No. 10—Capacity 3½ Gallons; Diameter over Top 13½ inches; Depth Inside, 12 inches..... 40.00
- Average Weight Each about 90 lbs.

INGOT MOULDS.

Malleable Iron.

- No. 212—Inside Measure 13x3½x2½ inches; Weight each about 21 lbs. Each \$4.00

Packed Loose.

IRON FLASK CLAMPS.

THOMPSON'S ADJUSTABLE.



Save time and do away with Wooden Wedges; The most Practical and Economical Flask Clamps on the market.

Nos.	1	2	3	4	5	6	7
Length, in...	10	14	18	24	30	36	42
Per dozen...	\$9.60	12.00	14.40	16.80	20.40	24.00	31.20

Average Weight per Dozen about 60 lbs.

SNAP FLASK.

THE BERMAYER.



Perfect Acting and Reliable; Always Ready; Hardwood, with Malleable Iron Trimmings.

	Each
All Sizes up to 16 by 16 inch.....	\$6.00
Larger than 16 by 16 inch.....	8.00

NOTE.—These Flasks are made to order. When ordering, STATE SIZE (INSIDE MEASUREMENTS), DEPTH OF COPE AND NOWEL OR DRAG.

NEW DIAMOND.



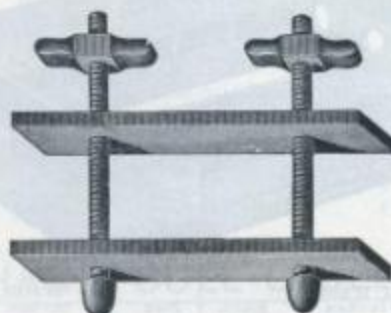
Hardwood, with Malleable Trimmings.

	Each
All Sizes up to 16 by 16 inch.....	\$6.00
Larger than 16 by 16 inch.....	8.00

NOTE.—These Flasks are made to order. When ordering, STATE SIZE (INSIDE MEASUREMENTS), DEPTH OF COPE AND NOWEL OR DRAG.

WOODEN FLASK CLAMPS.

For Iron Flasks.



Per Dozen

No. 0—Bars 12 inches between Screws; 2½ inches Wide; 1 inch Thick; Screws 15 inches under Head; 1 inch in Diameter; Nuts 6 inches Long.....	\$14.00
No. 1—Bars 16 inches between Screws; 2¾ inches Wide; 1¾ inches Thick; Screws 16 inches under Head; 1½ inches in Diameter; Nuts 6 inches long.....	18.00
No. 2—Bars 16¾ inches between Screws; 2¾ inches Wide; 1¾ inches Thick; Screws 16 inches under Head; 1½ inches in Diameter; Nuts 8½ inches Long.....	27.00
No. 3—Bars 22 inches between Screws; 2¾ inches Wide; 1½ inches Thick; Screws 16 inches under Head; 1½ inches in Diameter; Nuts 8½ inches Long.....	27.00

Packed Loose; Weight per Dozen about 50 lbs.

LEATHER PATTERN FILLETS.



Sizes run in Sixteenths from 1/16 to 3/8; in Eighths from 3/8 to 1 inch.

The Flexible Leather Fillet can be applied to any Corner and is as easily handled upon a Compound Curve as in a Straight Line. It is not affected by Heat, Cold or Moisture any more than is the Pattern itself, while its Lightness, Durability and Neatness make it the most desirable Fillet on the market. It is furnished in Lengths of 4 and 5 feet and put up in Bunches of 100 feet each, ready for shipment by mail or express.

Nos.	1	2	3	4	5	6	8	10	12	14	16
Radius, inches	1/16	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8	1
Per 100 feet	\$2.00	2.00	3.00	4.00	5.00	6.00	8.00	10.00	12.00	14.00	16.00

WOOD PATTERN FILLETS.

Made in Eleven Sizes, viz., from 1/8 to 2 inch Radius, in 3 feet Lengths. It is made of the Best Clear White

Pine, Kiln-dried and Free from Knots, Sap and Blemishes; Works in Cove to Better Edge.

Nos.	4	6	8	10	12	14	16	20	24	28	32
Radius, inches	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Per 100 feet	\$2.00	2.50	3.00	3.50	4.00	4.50	5.00	10.50	12.00	13.00	15.00

NOTE.—ALWAYS ORDER BY NUMBER AND BE SURE TO STATE WHETHER WOOD OR LEATHER IS WANTED. Use Wood Fillet for Straight Work, and Leather Fillet of same number for all Curved Lines.

Packed in Light Wooden Cases. 33 Yards is the Smallest Quantity for which we will accept orders. This Material is Very Light and can be Sent by Mail or Express.

RIBBED AND BEVELED IRON FLASKS.

Brass Moulders' Improved.



Nos.	Width, inches.	Length, inches.	Depth of Whole Flask, inches.	Each.	Nos.	Width, inches.	Length, inches.	Depth of Whole Flask, inches.	Each.
1	8	8	6	\$5.00	43	12	16	5	\$5.50
2	8	20	26	7.00	44	12	16	5½	5.00
3	8	40	5	9.50	45	12	16	6	6.00
4	9	12	7¾	6.00	46	12	16	7	6.00
5	9	12	4	4.00	47	12	16	8	7.00
6	10	12	5	4.50	48	12	16	9	10.00
7	10	12	6	5.00	49	12	17	3	5.50
8	10	12	9	6.00	50	12	30	5	9.50
9	10	15	4	5.00	51	12	30	6	9.50
10	10	15	5	5.00	52	12	30	7	10.00
11	10	15	6	5.50	53	12	36	5	11.00
12	10	17	6	6.00	54	12½	18	4½	6.00
13	10	17	7	6.50	55	12½	18	5	6.00
14	10	17	8	7.00	56	12½	18	5½	6.50
15	10	18	6	6.50	57	12½	18	6	6.50
16	10	27	5	8.50	58	12½	18	6½	6.50
17	10	27	6	8.50	59	12½	18	7	7.00
18	10	27	7	9.00	60	12½	18	8	8.00
19	10	27	8	9.00	61	12½	18	9	8.50
20	11	14	4	5.00	62	12½	18	10	9.00
21	11	14	4½	5.25	63	12½	18	12	10.00
22	11	14	5	5.00	64	12½	20½	5	6.50
23	11	14	5½	5.25	65	12½	20½	5½	6.75
24	11	14	6	5.50	66	12½	20½	6	7.00
25	11	14	8	6.50	67	12½	20½	6	7.00
26	11	15	4	5.00	68	12½	20½	7	7.50
27	11	16	4	5.00	69	12½	20½	8	8.50
28	11	16	5	5.00	70	12½	20½	9	9.50
29	11	16	5½	5.25	71	12½	20½	10	10.50
30	11	16	6	5.50	72	13	16	5	7.00
31	11	16	6½	5.75	73	13	16	5½	7.00
32	12	12	6	6.00	74	13	16	6	7.00
33	12	12	8	6.00	75	13	16	8	7.50
34	12	12	9	7.00	76	14	18	5	7.00
35	12	12	9½	9.00	77	14	18	6	7.50
36	12	12	12	10.00	78	14	18	7	8.00
37	12	14	4	5.00	79	14	18	10	9.00
38	12	14	5	5.00	80	14	20	5	7.50
39	12	14	6	5.50	81	14	20	6	8.00
40	12	14	8	6.50	82	14	20	7	8.50
41	12	16	4	5.00	83	14	20	7½	8.50
42	12	16	4½	5.25	84	14	20	8	9.00

Packed Loose.

Vary in Weight according to Size. The Weight of a 12 by 16 by 6 inch is about 30 lbs. each.

HAND LADLE BOWLS AND SHANKS.

Cast Iron, with Malleable Iron Shanks.



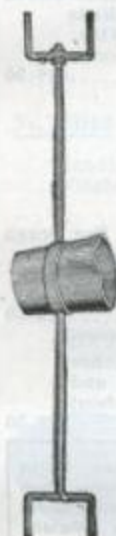
For Moulders.

	Capacity, lbs.	Dia. at Top, inches.	Dia. at Bottom, inches.	Depth, inches.	Weight each about, lbs.	Each.
No. 30	30	7	6	7	13	\$4.60
No. 50	50	8	7	8	15	5.00
No. 60	60	8½	7	8½	18	5.80

HAND BULL LADLES.

With Swiveled Shanks.

For Moulders.



	Capacity, lbs.	Dia. at Top, inches.	Dia. at Bottom, inches.	Depth, inches.	Weight each about, lbs.	Each.
No. 100	100	10	8¾	10	50	\$14.00
No. 150	150	11	9¾	11	60	16.00
No. 200	200	12	10½	12	74	20.00
No. 250	250	13	11¾	13	83	22.00
No. 300	300	14	12	14	88	24.00
No. 400	400	15	13	15	100	28.40
No. 500	500	16½	14½	16½	134	34.40

Packed Loose.

BRASS FOUNDRY FURNACES.



CUPOLAS. THE WHITING.



Improved Draft; Cast Dumping Brace; Complete with Brick Lining.

	(For Crucibles Nos.)	Diameter, inches.	Height Inside, inches.	Weight each about, lbs.	Each.
No. 1	10 to 30	20	25¾	420	\$76.00
No. 2	35 to 60	23	28¾	630	84.00
No. 3	70 to 100	26	31¾	800	116.00
No. 4	125 to 300	32	37¾	1050	140.00

The Heaviest and Best Designed Cupola on the market.

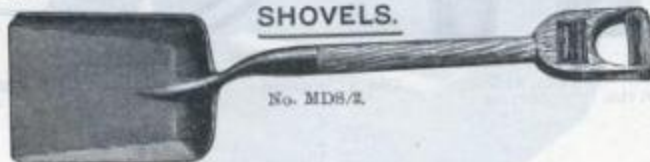
Specification Blanks Furnished on Application, and Price Quoted on receipt of Specifications Showing Measurements.

SHOVELS AND SPADES.

MAYNARD*.

BLADE, NECK AND SOCKET FORGED, BY PATENT PROCESS, FROM ONE PIECE OF HIGHEST GRADE CRUCIBLE STEEL; Thick Center Blade, Oil Tempered and Hardened; Neck 1 inch in Diameter; Closed Socket 6½ inches Long, fitted with Highest Grade White Ash or Maple Handles, Securely Wedged into the Socket.

Made of One Piece
of High Grade Crucible
Steel.



SHOVELS.

No. MDS/2.

Universally Recognized as the Highest Grade Shovels and Spades made in America.

D-Handle, Dirt.

No. MDS/2—SQUARE POINT, POLISHED.

Blade 11¼ inches Long, 9½ inches Wide; Handle, Socket and Neck, 26½ inches Long; Weight per dozen about 64 lbs.\$16.50

Per Dozen

No. MDR2—ROUND POINT, POLISHED, Blade

11¼ inches Long, 9½ inches Wide; Handle, Socket and Neck, 26½ inches Long; Weight per dozen about 64 lbs.\$16.50

Per Dozen



No. MLS/2.

Long Handle.

No. MLS/2—DIRT; SQUARE POINT, POLISHED,

Blade 11¼ inches Long, 9½ inches Wide; Handle, Socket and Neck, 48 inches Long; Weight per dozen about 66 lbs.\$16.50

Per Dozen

No. MLR2—DIRT; ROUND POINT, POLISHED,

Blade 11¼ inches Long, 9½ inches Wide; Handle, Socket and Neck, 48 inches Long; Weight per dozen about 66 lbs.\$16.50

Per Dozen

No. MLHR2—EXTRA HEAVY; RICE; ROUND POINT, POLISHED, Blade 11¼ inches

Long, 9½ inches Wide; Handle, Socket and Neck, 48 inches Long; Weight per dozen about 72 lbs. 18.50

The Blades are Rolled thicker in the Center than at the Edges, giving Great Stiffness where Rigidity is Most Needed.



PEERLESS, D-Handle, Dirt; Tapering Blade.

No. MPDS/2—SQUARE POINT, POLISHED, Blade 12¼ inches Long, 9¼ inches Wide at Top; 8¾ inches Wide at Point; Handle, Socket and Neck, 26½ inches Long; Weight per dozen about 66 lbs.\$16.50

Per Dozen



PEERLESS, Long Handle, Dirt; Tapering Blade.

No. MPLS/2—SQUARE POINT, POLISHED, Blade 12¼ inches Long, 9¼ inches Wide at Top; 8¾ inches Wide at Point; Handle, Socket and Neck, 48 inches Long; Weight per dozen about 72 lbs.\$16.50

Per Dozen



RAILROAD TAMPING.

Malleable Tamping D-Handle.

No. MTS/20—SQUARE POINT, BLACK, Blade 11¼ inches Long, 9½ inches Wide; Handle, Socket and Neck, 27½ inches Long; Weight per dozen about 78 lbs.\$16.50
One-half Dozen in a Bundle.

Per Dozen

MT



SHOVELS AND SPADES.

MAYNARD.

BLADE, NECK AND SOCKET FORGED, BY PATENT PROCESS, FROM ONE PIECE OF HIGHEST GRADE CRUCIBLE STEEL; Full Polished Thick Center Blade, Oil Tempered and Hardened; Neck 1 inch in Diameter; Closed Socket $6\frac{1}{2}$ inches Long; Fitted with Highest Grade White Ash or Maple Handles; Securely Wedged into the Socket.

SHOVELS.



No. MDL2

MOULDERS'.

Light D-Handle.

No. MDL2—SQUARE POINT, POLISHED, Blade
11 $\frac{1}{4}$ inches Long, 9 $\frac{1}{2}$ inches Wide;
Handle, Socket and Neck, 26 $\frac{1}{2}$ inches Long;
Weight per dozen about 62 lbs.....\$16.50

Medium D-Handle.

No. MDM2—SQUARE POINT, POLISHED, Blade
11 $\frac{1}{4}$ inches Long, 9 $\frac{1}{2}$ inches Wide;
Handle, Socket and Neck, 26 $\frac{1}{2}$ inches Long;
Weight per dozen about 73 lbs.....\$16.50



LONG HANDLE, GOLD AND SILVER
MINERS', With Half Spring Blade.

No. MHS/2—ROUND POINT, POLISHED, Blade
11 $\frac{1}{4}$ inches Long, 9 $\frac{1}{2}$ inches Wide;
Handle, Socket and Neck, 48 inches Long;
Weight per dozen about 69 lbs.....\$16.50

SHOVELS.



No. MLI/2

LONG HANDLE, IRRIGATING.

ROUND POINT, POLISHED, Blade 11 $\frac{1}{4}$ inches
Long, 9 $\frac{1}{2}$ inches Wide; Handle, Socket and Neck, 48
inches Long.

No. MLI/2—Medium Lift, 4 $\frac{1}{2}$ inches.....\$16.50
No. MLIH2—High Lift, 5 $\frac{1}{2}$ inches.....16.50
Weight per dozen about 60 lbs.

SPADES.



D-Handle.

No. MSDS/2—SQUARE POINT, POLISHED, Blade
11 $\frac{1}{4}$ inches Long, 7 $\frac{1}{2}$ inches Wide;
Handle, Socket and Neck, 27 inches Long;
Weight per dozen about 62 lbs.....\$16.50



Long Handle.

No. MSL2—SQUARE POINT, POLISHED, Blade
12 inches Long, 7 $\frac{1}{2}$ inches Wide; Han-
dle, Socket and Neck, 48 inches Long;
Weight per dozen about 68 lbs.....\$16.50

FINCH.

SOCKET STRAP PATTERN; Blade and Straps Forged from High Carbon Steel, Full Polished Blade, Care-
fully Tempered; Fitted with High Grade Ash Handles.

SHOVELS.



D-Handle, MOULDERS'.

No. FDM2—SQUARE POINT, POLISHED, Blade 12 inches Long, 10 inches Wide; Handle 26 inches Long;
Weight per dozen about 64 lbs.....\$12.00
One-half Dozen in a Bundle.

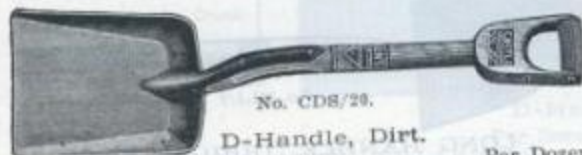


SHOVELS AND SPADES.

CASTLEN*.

PLAIN BACK PATTERN; Blade Forged from Medium Grade Steel, with Straps Securely Welded on; Fitted with Medium Grade Ash Handles.

SHOVELS.



No. CDS/20.

D-Handle, Dirt.

No. CDS/20—SQUARE POINT, BLACK, Blade 11½ inches Long, 9½ inches Wide; Handle 26½ inches Long; Weight per dozen about 58 lbs. \$11.00

No. CDS/2—SQUARE POINT, POLISHED, Blade 11½ inches Long, 9½ inches Wide; Handle 26½ inches Long; Weight per dozen about 58 lbs. 11.50

No. CDR2—ROUND POINT, POLISHED, Blade 11½ inches Long, 9½ inches Wide; Handle 26½ inches Long; Weight per dozen about 55 lbs. 11.50



No. CLR2.

Long Handle, Dirt.

No. CLS/2—SQUARE POINT, POLISHED, Blade 11½ inches Long, 9½ inches Wide; Handle 51 inches Long; Weight per dozen about 62 lbs. \$11.50

No. CLR2—ROUND POINT, POLISHED, Blade 11½ inches Long, 9½ inches Wide; Handle 51 inches Long; Weight per dozen about 58 lbs. 11.50

SPADES.



No. CSD2.

D-Handle.

No. CSD2—SQUARE POINT, POLISHED, Blade 12 inches Long, 7½ inches Wide; Handle 27 inches Long; Weight per dozen about 58 lbs. \$11.50

Long Handle.

No. CSL2—SQUARE POINT, POLISHED, Blade 12 inches Long, 7½ inches Wide; Handle 51 inches Long; Weight per dozen about 58 lbs. \$11.50

CLAYBANK*.

HOLLOW BACK PATTERN; One Piece Medium Grade Steel Blade and Socket; Fitted with Medium Grade Ash Handle.

SHOVELS.



No. CCDS/2.

D-Handle, Dirt.

Per Dozen

No. CCDS/2—SQUARE POINT, POLISHED, Blade 11½ inches Long, 9½ inches Wide; Handle 27 inches Long; Weight per dozen about 58 lbs. \$12.50

No. CCDS2—ROUND POINT, POLISHED, Blade 13 inches Long, 9½ inches Wide; Handle 27½ inches Long; Weight per dozen about 56 lbs. 13.50



No. CCLR/2.

Long Handle, Dirt.

Per Dozen

No. CCLS/2—SQUARE POINT, POLISHED, Blade 11½ inches Long, 9½ inches Wide; Handle 52 inches Long; Weight per dozen about 64 lbs. \$12.50

No. CCLR2—ROUND POINT, POLISHED, Blade 12 inches Long, 9½ inches Wide; Handle 52 inches Long; Weight per dozen about 66 lbs. 12.50

No. CCDC/10.
COAL.

D-Handle, 27 inches Long; Square Point; Black.

No.	CCDC10	CCDC20	CCDC30
Size	1	2	3
Blade, inches	13½ x 13½	14½ x 14½	15½ x 14½
Weight per dozen	78	80	84
Per dozen	\$12.60	14.50	16.15

SPADES.



D-Handle.

Per Dozen

No. CCSD2—SQUARE POINT, POLISHED, Blade 12 inches Long, 7½ inches Wide; Handle 27 inches Long; Weight per dozen about 67 lbs. \$10.00

One-half Dozen in a Bundle.

TRADE MARK
"FAULTLESS" AND
"CLAYBANK,"
REGISTERED

GRAIN SCOOPS.



No. BDW1.

FAULTLESS*.

Have the Proper
Shape. Made of the
Best Material. Select-
ed Handles.

HOLLOW BACK PATTERN: One Piece, High Carbon Steel, Blade and Socket; Fitted with High Grade Ash Handle.

WESTERN PATTERN, D-Handle, Full Polished.

Nos.	BDW4	BDW5	BDW6	BDW7	BDW8	BDW9	BDW10	BDW12
Size	4	5	6	7	8	9	10	12
Length of Blade, inches	15½	16	16½	17	17½	18	18¾	19½
Width of Blade, inches	12½	13½	14	14½	14½	14¾	15	15½
Length of Handle, inches	27½	27½	27½	27½	27½	27½	27½	27½
Weight per dozen about, lbs.	78	84	88	90	92	94	96	104
Per dozen	\$15.50	16.50	17.35	18.25	19.25	20.75	22.25	23.50

EASTERN PATTERN, D-Handle, Half Polished.

Nos.	BDE20	BDE30
Size	2	3
Length of Blade, inches	15	15½
Width of Blade, inches	11	11½
Length of Handle, inches	26½	26½
Weight per dozen about, lbs.	74	78
Per dozen	\$13.25	14.00

FURNACE SCOOPS.



CLAYBANK*.

HOLLOW BACK PATTERN: One Piece, Medium Grade Steel, Blade and Socket; Fitted with Medium Grade Ash Handle.

Furnace; D-Handle; 16 Gauge.

No. C—BLACK; Blade 14 inches Long, 9¼ inches Wide; Handle 27 inches Long; Weight per dozen about 64 lbs.	Per Dozen \$12.00
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No. AF0.

AETNA*.

RIVETED BACK PATTERN: Blade Forged from Medium Grade Steel, with Straps Securely Riveted On; Black Finish; Fitted with Medium Grade Ash Handle.

D-Handle; Square Point; 16 Gauge.

No. AF0—Blade 14 inches Long, 9 inches Wide; Handle 27 inches Long; Weight per dozen about 64 lbs.	Per Dozen \$12.00
No. AF1—Blade 15 inches Long, 10½ inches Wide; Handle 27 inches Long; Weight per dozen about 70 lbs.	15.00
One-half Dozen in a Bundle.	

- 643 -
BARROWS.

**RUN EASY*; CONTRACTORS'.**

Hardwood Frame and Legs, Extra Steel Braced and Bolted; Pressed, 16 Gauge Sheet Steel Tray, with Turned Wired Edges, Bolted to Frame; 16½ inch Steel Wheel; Capacity 4 cubic feet; Tray 28 inches Wide; 36 inches Long; 14 inches Greatest Depth; Height 26 inches.

Per Dozen

No. 17—RUN EASY*; PAINTED BROWN, WITH-OUT EXTENDED HANDLES; Length over all 66 inches; Weight each about 60 lbs.\$60.00



Extra Heavy, Extra Braced and Bolted. The Best for Contractors, Graders, Etc.

RUN EASY*; CONTRACTORS'.

Per Dozen

No. 27—RUN EASY*; Hardwood Frame; Bent Angle Steel Legs, Extra Braced and Bolted; Pressed 16 Gauge Sheet Steel Tray, Painted Brown, with Turned and Wired Edges, Bolted and Riveted to Frame; 16 inch Steel Wheel; Capacity 4 Cubic feet; Tray 28½ inches Wide; 35½ inches Long; Height 21½ inches; Length over all 62 inches; Weight each about 65 lbs.\$80.00

**RUN EASY*; CONCRETE.**

Bent Angle Steel Legs, Extra Steel Braced and Bolted at Front and Back; Pressed 16 Gauge Extra Large Sheet Steel Tray, with Turned Wired Edges, Bolted to Frame; 17½ inch Japanned Steel Wheel; Capacity 4 Cubic feet; Tray 25 inches Wide; 37 inches Long; 17½ inches Greatest Depth; Height 25 inches.

Per Dozen

No. 20—RUN EASY*, PAINTED BROWN, WITH HANDLES EXTENDED in Front of Wheel to afford Dumping Fulcrum and to protect Wheel; Length over all 65 inches; Weight each about 70 lbs.\$75.00
One-twelfth Dozen in a Bundle; Knocked Down.



TRADE MARKS:
"HERCULES"
AND
"RUN EASY,"
REGISTERED.

K. & J. CONTRACTORS'; EXTRA STRONG.

Per Dozen

No. 2B—Hardwood Frame; Tipped Handle Extension; Painted Brown; Bent Angle Steel Legs, Extra Braced and Bolted, Painted Black; Pressed 15 Gauge Steel Tray with Turned and Wired Edges, Bolted and Riveted to Frame; Heavy Tray Braces; Tray 28½ inches Wide, 38½ inches Long; 8½ inches Greatest Depth; Capacity 4 Cubic Feet; Painted Brown; Extreme Height 26 inches; Extreme Length 65 inches; Weight each about 75 lbs.\$90.00



Are Made of Selected Material and are Built to Stand the Wear and Tear of Mining and Contractors' Work.

No. H4.

HERCULES*; CONTRACTORS'.

All Steel; Pressed Sheet Steel Tray, with Turned Wired Edges, Bolted and Riveted to One-piece Tubular Bent Handles; Steel Legs and Braces; 16½ inch Steel Wheel; Handles Extend in Front of Wheel to afford Dumping Fulcrum and protect Wheel; Painted Dark Maroon.

Nos.	H 4	H 6	H 10
Capacity, cubic ft.	3	4	6
Steel Tray, Gauge.	15	15	14
Size of Tray, in.	27x31x6	28x35½x7	33½x42x9
Length over all, in.	68	68	68
Height, inches.	19½	21½	25½
Wgt. each about lbs.	60	68	81
Each.	\$19.75	14.25	20.00

NOTE—No. H10 is particularly suitable for handling Coal and Coke.

One-twelfth Dozen in a Bundle; Knocked Down.

BARROW WHEELS.

Extra Wheels for RUN EASY* Contractors' Barrows.

Per Dozen

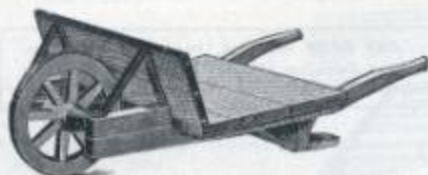
No. 17W—STEEL WHEELS, 16 inches Diameter;
For Nos. 17 and 17½; Weight per dozen
about 150 lbs.\$18.00
Packed Loose.

MT



TRADE MARK:
"CUMBERLAND,"
REGISTERED.

STONE BARROWS.



Extra Heavy, Steel Braced and Bolted, Hardwood Frame and Handles; Hardwood Bottom and Front, Steel Bound; Extra Heavy Wood Wheels; Painted Red and Varnished.

No. 13—TOLEDO; Bent Handles; Length over all 73 inches; Height 14 inches; Tray 27 inches Wide, 29 inches Long; With Front Piece 6 inches Deep; Wheel 21 inches Diameter, with 1½ inch Steel Tire; Weight per dozen about 744 lbs. \$60.00

One-twelfth Dozen in a Bundle; Knocked Down.



Extra Heavy, Hardwood, Painted Red; Frame Heavily Ironed and Full Bolted; Bent Handles; Non-turning Axle Bolt; Iron-Strapped Bed.

No. MS—Steel Wheel, Painted Black, with 1½ inch Wide Heavy Tire, 17½ inches Diameter; Width of Tray 27 inches, Length 27 inches; Length over all 81½ inches; Height 18½ inches; Weight per dozen about 840 lbs. \$48.00

HANDLES.



SINGLE BIT; Axe; Scroll End; Medium Size.



SINGLE BIT; Axe; Plain End; Medium Size.

HAND SHAVED FINISH; Made from Second Growth Swamp Hickory Butts; Standard Pattern; Extra Belted Finish and Thoroughly Seasoned.

CUMBERLAND*.

	Per Dozen
No. CSXXX—FIRST SELECTION; Octagon; 36 inches Long.	\$11.50
No. CSXXX4—MEDIUM SELECTION; Octagon; 34 inches Long	9.40
No. CSXXX6—MEDIUM SELECTION; Octagon; 36 inches Long	9.40
No. CSX—THIRD SELECTION; Octagon; 36 inches Long	7.20
No. CSAA—FIRST SELECTION; Oval; 36 inches Long	11.50
No. CSA34—MEDIUM SELECTION; Oval; 34 inches Long	9.40
No. CSA36—MEDIUM SELECTION; Oval; 36 inches Long	9.40
No. CSI—THIRD SELECTION; Oval; 36 in. Long	7.20

Weight per Crate, 34 inch, about 40 lbs.; Weight per Crate, 36 inch, about 44 lbs.

CUMBERLAND*.

SINGLE BIT; Axe; Plain End; Extra Heavy.

	Per Dozen
No. CHXX—MEDIUM SELECTION; Octagon; 36 inches Long	\$8.60
No. CHX—THIRD SELECTION; Octagon; 36 inches Long	6.50
No. CHA—MEDIUM SELECTION; Oval; 36 inches Long	8.60

Weight per Crate about 48 lbs.

CUMBERLAND*.

DOUBLE BIT; Axe; Plain End; Medium Size.

	Per Dozen
No. CDXX—MEDIUM SELECTION; Octagon; 36 inches Long	\$7.20
No. CDAA—FIRST SELECTION; Oval; 36 inches Long	9.00
No. CDA—MEDIUM SELECTION; Oval; 36 inches Long	7.20
No. CDI—THIRD SELECTION; Oval; 36 inches Long	5.40

Weight per Crate about 45 lbs.



OVAL; COAL MINERS' PICK.

CUMBERLAND*.

	Per Dozen
No. CMP—Medium Selection; 34 inches Long; Light Body, Medium Eye, 3x¾ inch;	
Weight per crate about 45 lbs.	\$2.25

Two Dozen in a Crate.



OVAL; DRIFTING PICK. Per Dozen

No. CDP—FORTY-NINER PATTERN; Medium Selection; 34 inches Long; Extra Heavy, with Button Head; Weight per crate about 60 lbs.	\$4.00
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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

HANDLES.

KEEN KUTTER Handles, Highest Grade Timber, Genuine Hand Made, Thoroughly Seasoned, Superior Finish.

KEEN KUTTER®.

GENUINE HAND-MADE, on the Old Wooden Horse, from Highest Grade all White Second Growth Bastard Cut Swamp Hickory Butts; Extra Seasoned; Carefully Inspected and Warranted Uniform; Extra Belted; Wax Finished; Labeled and Stamped; Wrapped in Paper and Securely Crated.



No. KX35.

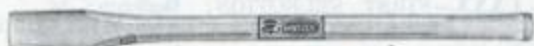


No. KR36.

SINGLE BIT; Axe; Plain End.

	Per Dozen
No. KX34—REGULAR PATTERN, OCTAGON; 34 inches Long; Weight per dozen about 26 lbs.	\$12.00
No. KX36—REGULAR PATTERN, OCTAGON; 36 inches Long; Weight per dozen about 28 lbs.	12.00

	Per Dozen
No. KR34—REGULAR PATTERN, OVAL; 34 inches Long; Weight per dozen about 24 lbs.	\$12.00
No. KR36—REGULAR PATTERN, OVAL; 36 inches Long; Weight per dozen about 26 lbs.	12.00
No. KN36—NORTHERN, SLIM PATTERN, OVAL; 36 inches Long; Weight per dozen about 23 lbs.	12.00



DOUBLE BIT; Axe.

	Per Dozen
No. KDX36—REGULAR PATTERN, OCTAGON; 36 inches Long; Weight per dozen about 26 lbs.	\$12.00

	Per Dozen
No. KDR36—REGULAR PATTERN, OVAL; 36 inches Long; Weight per dozen about 23 lbs.	\$12.00

One Dozen in a Crate.



SLEDGE OR SPIKE MAUL; Extra Slim Neck; Oval.

Nos.	KM32	KM34	KM36
Length, inches	32	34	36
Weight per dozen about, lbs.	18	20	22
Per dozen	\$7.00	7.90	7.90

Two Dozen in a Crate.



RAILROAD PICK.



DRIFTING PICK.

	Per Dozen
No. KRP—OVAL; 36 inches Long; Weight per dozen about 41 lbs.	\$13.90

	Per Dozen
No. KDP—OVAL; 34 inches Long; Weight per dozen about 29 lbs.	\$13.00



CARPENTER'S ADZE.

	Per Dozen
No. KA34—OVAL; 34 inches Long; with Squared Eye; Weight per dozen about 28 lbs.	\$12.00

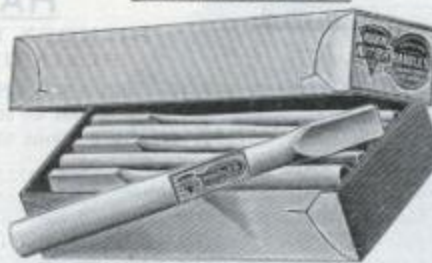
One Dozen in a Crate.

TRADE MARKS:
E. C. SIMMONS' KEEN-KUTTER
"NONPAREIL"
REGISTERED

-652- HANDLES.



MADE FROM HIGHEST GRADE all White Second Growth, Bastard Cut, Swamp Hickory Butts. Extra Seasoned, Carefully Inspected and Warranted Uniform; Extra Belted. Wax Finished and Labeled. Wrapped in Tissue Paper and Paper and Boxed.



LATHING HATCHET.

No. KL13—KEEN KUTTER* 13½ INCHES LONG; Slim Neck, Swell End; for Underhill Pattern Lathing Hatchets; Weight per dozen about 5 lbs. \$2.30
One Dozen in a Cardboard Box.

ADZE EYE; TACK HAMMER. KEEN KUTTER*

No. K11—KEEN KUTTER*: 11 INCHES LONG; for KEEN KUTTER* Nos. K400, K500 and Bay State Nos. 600 and 650 Tack Hammers; Weight per dozen about 2 lbs. \$2.30

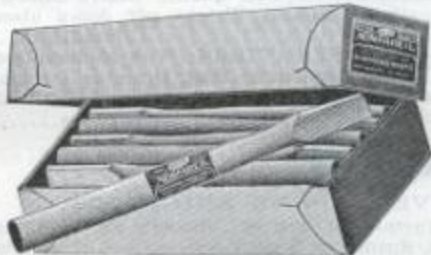
ADZE EYE; NAIL HAMMER.

Nos.	K12	K13	K14
Length, inches	12	13	14
For Nail Hammers, Sizes	3 and 4	2 and 3	1 and 1½
Weight per dozen about, lbs.	3¾	4¾	5¾
Per dozen	\$2.30	2.30	2.30



SHINGLING HATCHET. Per Dozen

No. KS/14—KEEN KUTTER*: 14 INCHES LONG; for Standard Pattern, Sizes 2 and 3 Shingling, Half or Claw Hatchets; Weight per dozen about 5½ lbs. \$2.30
One Dozen in a Cardboard Box.



MADE FROM EXTRA SELECT, ALL WHITE, Second Growth, Bastard Cut, Swamp Hickory Butts; Thoroughly Seasoned, Smooth Belted Finish.

NONPAREIL*.

ADZE EYE; NAIL HAMMER.

No. N14—NONPAREIL*: 14 INCHES LONG; for Nail Hammers, Sizes 1 and 1½. \$2.30
No. N13—NONPAREIL*: 13 INCHES LONG; for Nail Hammers, Size 2. 2.30
Weight per Dozen about 5 lbs.
One Dozen in a Cardboard Box.



SHINGLING HATCHET. Per Dozen

No. NS/14—NONPAREIL*: 14 INCHES LONG; FOR STANDARD PATTERN, Size 2 and 3 Shingling, Half or Claw Hatchets; Weight per dozen about 5½ lbs. \$2.30

No. NH14—NONPAREIL*: 14 INCHES LONG; FOR HAINES' OR LIGHT PATTERN, Size 2 Shingling or Half Hatchets; Weight per dozen about 4½ lbs. 2.30
One Dozen in a Cardboard Box.



BROAD HATCHET.

For KEEN KUTTER Broad Hatchets.

Nos.	KB16	KB17
Length, inches	16	17
Weight per dozen about, lbs.	6	7
Per dozen	\$2.50	2.75



OVAL EYE; RIVETING HAMMER.

For KEEN KUTTER Riveting Hammers.

Nos.	KR12	KR13	KR14
Length, inches	12	13	14
Weight per dozen about, lbs.	1½	1½	2
Per dozen	\$2.30	2.30	2.30

Packed Loose.



BROAD HATCHET. Per Dozen

No. NBH2—NONPAREIL*: 17 INCHES LONG; for Nos. 2, 3 and 4 Broad or Bench Hatchets; Weight per dozen about 7 lbs. \$2.80
Packed Loose.



NONPAREIL*.

OVAL EYE; MACHINISTS' HAMMER;

Spring Neck; Light.

Nos.	NM14	NM16	NM18	NM20
Length, inches	14	16	18	20
For Machinists' Hammers,				
Nos.	00	0	1 and 2	3 and 4
Wgt. per doz. about, lbs.	4¼	4½	4¾	5
Per dozen	\$2.30	2.50	2.80	3.20

OVAL EYE; BLACKSMITHS' HAND HAMMER; Spring Neck; Heavy.

Nos.	NB16	NB18
Length, inches	16	18
For Blacksmiths' Hammers, Nos.	1	2
Weight per dozen about, lbs.	6½	6¾
Per dozen	\$2.50	2.80



OVAL EYE; HAND DRILLING HAMMER.

Per Dozen

No. ND18—NONPAREIL*: 18 INCHES LONG; Straight Tapering Pattern for No. CHD Drilling or Nos. NLS, MRS and OSS Striking Hammers; Weight per dozen about 6 lbs. \$2.80
Packed Loose.



No. SPAA

HANDLES.HICKORY MACHINE MADE;
PLAIN BELTED FINISH.

OVAL; RAILROAD PICK. STANDARD.

Per Dozen

No. SPAA—EXTRA QUALITY; 36 inches Long; Weight per crate about 60 lbs.	\$9.60
No. SPA—EXCELSIOR QUALITY; 36 inches Long; Weight per crate about 58 lbs.	7.60
No. SP1—No. 1 QUALITY; 36 inches Long; Weight per crate about 57 lbs.	6.40
No. SP2—No. 2 QUALITY; 36 inches Long; Weight per crate about 57 lbs.	4.10
No. SP3—No. 3 QUALITY; 36 inches Long; Weight per crate about 69 lbs.	3.40
OVAL; MATTOCK.	Per Dozen
No. SM1—No. 1 QUALITY; 36 inches Long; Weight per crate about 60 lbs.	\$6.40



No. DXX

Two Dozen in
a Crate.

No. DSXX

ECLIPSE*, D SHOVEL AND SCOOP.

Bent Ash, with Wood D; Smooth Belted Finish; Not Chucked.

SHOVEL; With Full Double Bend, to fit Plain Back

SCOOP; With Extra Full Single Bend, to fit Samson
or other Riveted Back or Plain Back Scoops.

Nos.	DSXX	DSX	Nos.	DSXX	DSX
Grade	XX (Extra Select)	X (Select)	Grade	XX (Extra Select)	X (Select)
Length, inches	29	29	Length, inches	30	30
Wgt. per dozen about, lbs.	19	19	Wgt. per dozen about, lbs.	21	21
Per dozen.	\$4.25	3.50	Per dozen.	\$4.25	3.50



No. SDXX

**ECLIPSE*,
D SPADE.**

No. PSDX

Bent Ash, with Wood D; Smooth Belted Finish; Not Chucked.

REGULAR PATTERN; With Slight Double Bend, to
fit Plain Back Spades.

No. ISDXX—ILLINOIS PATTERN; With Slight Double Bend to fit No. ISN2 Illinois Nursery Spades; XX Quality (Extra Select); Length 32 inches; Weight per dozen about 21 lbs.	\$4.10
No. PSDX—POST PATTERN; With Medium Dou- ble Bend to fit Post, Drain or Ditching Spades; X Quality (Select); Length 30 inches; Weight per dozen about 29 lbs.	3.35

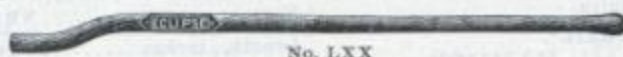
Nos.	SDXX	SDX
Grade	XX (Extra Select)	X (Select)
Length, inches	30	30
Wgt. per dozen about, lbs.	19	19
Per dozen.	\$4.10	3.35



No. CXD

ECLIPSE*, CHISHOLM PATTERN; SHOVEL, SPADE AND SCOOP.Select Ash; Slight Single Bend, but sawed for bending further, if desired; Smooth Belted Finish; Not
Chucked; For Faultless, Claybank or other Hollow Back Shovels, Spades or Scoops.

No. CXD—X QUALITY; WOOD D HANDLE; Length 28 inches; Weight per dozen about 19 lbs.	\$3.35
No. CXL—X QUALITY; LONG HANDLE; Length 54 inches; Weight per dozen about 21 lbs.	3.00



No. LXX

ECLIPSE*, LONG SHOVEL AND SPADE.

Bent Ash; Smooth Belted Finish; Not Chucked.

SHOVEL; With Full Double Bend; To fit Plain Back

SPADE; With Slight Double Bend; To fit Plain

Shovels, Nos.	LXX	LX	Back Spades, Nos.	SLXX	SLX
Grade	XX (Extra Select)	X (Select)	Grade	XX (Extra Select)	X (Select)
Length, inches	54	54	Length, inches	54	54
Wgt. per dozen about, lbs.	24	21	Wgt. per dozen about, lbs.	23	21
Per dozen.	\$4.00	3.00	Per dozen.	\$3.50	2.50



No. ML

ECLIPSE*, MAYNARD PATTERN; SHOVEL AND SPADE.Extra Select Ash; Straight; Smooth Belted Finish; Chucked to fit Socket of Maynard and Challenge Shov-
els and Spades.

No. MD—XX QUALITY; WOOD D HANDLE; Regular Length, 23 inches Long; Weight per dozen about 16 lbs.	\$4.10
No. MDD—XX QUALITY; WOOD D HANDLE; Extra Length, for No. MSDD2 Spades; 30 inches Long; Weight per dozen about 19 lbs.	4.10
No. ML—XX QUALITY; LONG HANDLE; 48 inches Long; Weight per dozen about 23 lbs.	3.50

One Dozen in a Bundle.

E.C. SIMMONS. EXTRA GRADE 7 INCH No 107

DELMAR

E.C. SIMMONS. EXTRA GRADE No 4

E.C. SIMMONS. EXTRA GRADE 7 INCH. No 107

THE RECOLLECTION OF QUALITY REMAINS LONG AFTER THE PRICE IS FORGOTTENTM—E.C. SIMMONS

TRADE MARK REGISTERED.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

GLASS CUTTERS.



KEEN KUTTER*

Extra quality large-sized wheel, which runs easier. Polished ebonized handle.

- No. 10—NICKEL PLATED Stampel Steel Frame and Ferrule; Ebonized Hardwood Handle; Highest Grade Carbonized Steel Large Size Wheel, which runs easier and has more Cutting Surface than any other Glass Cutter made; Length of Handle $3\frac{3}{4}$ inches; Length over all $5\frac{1}{2}$ inches; Weight per dozen about $\frac{5}{8}$ lbs. \$6.00
- One Dozen in a Cardboard Box.



GLAZIERS' DIAMOND.

- No. 11—Nickel Plated Cast Steel Head and Ferrule; Ebony Finished Hardwood Handle; GENUINE DIAMOND POINT at one end of Head; Polished Steel Guide Wheel at Reverse End; Length of Head $1\frac{5}{16}$ inches; Width $\frac{3}{4}$ inch; Length over all $3\frac{3}{4}$ inches; Instructions for use accompany each Cutter; Weight per dozen about 1 lb. \$50.00
- One-twelfth Dozen in a Cardboard Box.



GAUGE.

- No. 18—Nickel Plated; Steel Spring Double Arm; Hardened Steel Wheel; Adjustable Steel Gauge on Arm, Secured at any distance from Wheel with Steel Thumb Screw; Diameter of Gauge $\frac{7}{16}$ inch; Diameter of Arms $\frac{3}{16}$ inch; Length over all 10 inches; Weight per dozen about $2\frac{1}{4}$ lbs. \$6.00
- One-twelfth Dozen in a Cardboard Box.



GAUGE.

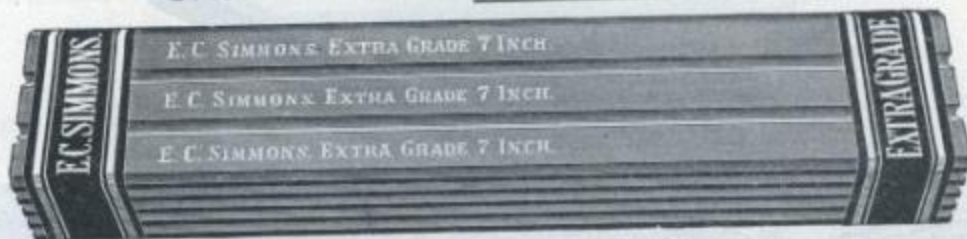
- No. 36—Nickel Plated; Steel Double Arm and Spring Bow Handle; Hardened Steel Wheel; Adjustable Steel Gauge on Arm, Secured at any distance from Wheel with Steel Thumb Screw; Diameter of Gauge $\frac{7}{16}$ inch; Diameter of Arms $\frac{3}{4}$ inch; Length of Arm $7\frac{1}{2}$ inches; Length over all 10 inches; Weight per dozen about 3 lbs. \$12.00
- One Dozen in a Cardboard Box.



GAUGE.

- No. 35—Nickel Plated; Steel Arm and Handle; Carbonized Steel Wheel; Adjustable Steel Gauge on Arm, Secured at any distance from Wheel with Steel Thumb Screw; Diameter of Gauge $\frac{5}{8}$ inch; Diameter of Arm $\frac{3}{16}$ inch; Length of Arm 6 inches; Length over all $7\frac{1}{2}$ inches; Weight per dozen about $1\frac{1}{2}$ lbs. \$6.00
- One-twelfth Dozen in a Cardboard Box.

CARPENTERS' LEAD PENCILS.



E. C. SIMMONS* EXTRA GRADE.

Flat Sides; Beveled Edges; Selected Cedar; Nicely Finished in Maroon and Black, Lettered in Gilt; Extra Grade Lead, has an evenness not found in any other Carpenters' Pencil.

- No. 107 —7 INCHES; E. C. SIMMONS* EXTRA GRADE; Weight per gross about 5 lbs. \$ 8.00
- No. 107H —7 INCHES; E. C. SIMMONS* EXTRA GRADE HARD LEAD; Weight per gross about 5 lbs. 8.00
- No. 107VH —7 INCHES; E. C. SIMMONS* EXTRA GRADE VERY HARD LEAD; Wgt. per gross about 5 lbs. 8.00
- No. 109 —9 INCHES; E. C. SIMMONS* EXTRA GRADE; Weight per gross about 6 lbs. 10.00

One-half Gross in a Cardboard Box.

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LEAD PENCILS.

OFFICE.



The Excellence of these Pencils is Due to the High Quality of the Graphite used and the Universal Smoothness and Evenness of the Lead, which is Obtained by a Special Process of Making the Ingredients used.

**E. C. SIMMONS* EXTRA GRADE.**

Round Rubber Tipped, Nickel Plated Ferrule; Finest Cedar, Nicely Finished in Maroon and Black, Lettered in Gilt, Giving them an Extremely High Grade Appearance; Extra Grade Lead, Free From Grit, Writes with an Even Smoothness, Adaptable to any Business; Will give Satisfaction; **SHARPENED READY FOR USE.**

	Per Gross
No. 2 —SOFT LEAD, NO. 2 GRADE; Weight per gross about 3 lbs.	\$6.75
No. 3 —MEDIUM LEAD, NO. 3 GRADE; Weight per gross about 3 lbs.	6.75
No. 4 —HARD LEAD, NO. 4 GRADE; Weight per gross about 3 lbs.	6.75
No. 2½ —Scratch Book; Lead, NO. 2½ GRADE; Weight per gross about 2 lbs.	6.00

The Entire Product of the Factory for the United States is Controlled and Distributed by us.

**E. C. SIMMONS* EXTRA GRADE.**

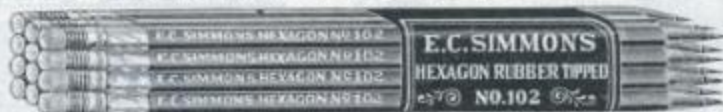
Round Rubber Tipped, Nickel Plated Pencil Point Protector; Finest Cedar, Nicely Finished in Maroon and Black, Lettered in Gilt, Giving them an Extremely High Grade Appearance; Extra Grade Lead, Free from Grit; Writes with an Even Smoothness, Adaptable to any Business; Will Give Satisfaction; **SHARPENED READY FOR USE.**

	Per Gross
No. 2P —SOFT LEAD, NO. 2 GRADE; Weight per gross about 3 lbs.	\$7.00

**E. C. SIMMONS* HEXAGON.**

Finest Cedar, Maroon Finish, Gilt Imprint; **SHARPENED READY FOR USE.**

	Per Gross
No. HH —MEDIUM SOFT LEAD, NO. 2 GRADE; Weight per gross about 2 lbs.	\$8.00
No. HHH —MEDIUM HARD LEAD, NO. 3 GRADE; Weight per gross about 2½ lbs.	8.00
No. HHHHH —VERY HARD LEAD, NO. 5 GRADE; Weight per gross about 2 lbs.	8.00

**E. C. SIMMONS* HEXAGON.**

Rubber Tipped Nickel Plated Ferrule, Finest Cedar, Maroon Finish, Gilt Imprint; **SHARPENED READY FOR USE.**

	Per Gross
No. 102 —MEDIUM SOFT LEAD; Weight per gross about 3 lbs.	\$10.00
No. 103 —MEDIUM HARD LEAD; Weight per gross about 2½ lbs.	10.00

One-half Gross in a Cardboard Box.

PENCIL HOLDERS.**ECONOMY.**

No. 551—BRASS, Japanned Case; Rubber Tip, with Adjustable Brass Nickel Plated Protector; Weight per gross about 5 lbs. \$9.00
One-twelfth Gross on a Card; One-half Gross in a Carton.

PENCIL POINT PROTECTORS.

No. 367—BRASS, NICKEL PLATED; Screw Inserted Rubber; Weight per gross about 1½ lbs. \$6.00
One-half Gross in a Cardboard Box.

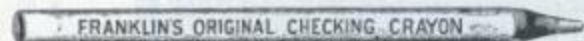
RAILROAD CRAYONS.

No. RR—WHITE; Enameled Hardened Surface; 1x4¼ inches; Weight per gross about 12½ lbs. \$2.00
One Gross in a Wood Box; Five Boxes in a Crate.

METAL WORKERS' CRAYONS.

Will Mark on Iron, Steel, Brass, Copper, Tin, Weather-Stained Lumber, Cloth, etc. The Mark will not burn off when used in a fire by Blacksmiths, Boiler Makers and Machinists. It is cheaper, stronger and more convenient than any other substance used for marking rough surfaces.

No. 5—5 INCH SOAPSTONE CRAYON; ½x3/16 inch; Not Covered; Weight per gross about 8 lbs. \$7.00
One Gross in a Wood Box.

CHECKING AND LUMBER PENCILS.

Franklin's Oil Checking; Paper Covered; 5/16x6¼ inches.

Will Write on all kinds of surfaces, Paper, Wood, Leather, Glass, Tin, Iron and Other Metals. Being covered with Thick Paper Shell, they can be cut with a knife like wood; Can be carried in the pocket or over the ear, and will not break in falling or dropping.

No. 2F—FRANKLIN'S BLACK Crayon Pencils.... \$13.00
No. 3F—FRANKLIN'S BLUE Crayon Pencils.... 18.00
No. 4F—FRANKLIN'S RED Crayon Pencils.... 18.00
One-twelfth Gross in a Cardboard Box; Six Gross in a Case; Weight per Gross about 3½ lbs.

LUMBER CRAYONS.

SIMMONS' Hexagon Lumber; Paper Covered; ½x6 inches.

Made Entirely from Ozocerite Mineral (not Graphite); Ground and Moulded in Hexagon Form, the Mineral is Colored with High Grade Dyes; Will not rub or wash off; Will Mark Clearly on Wet or Dry Lumber.

No. 61—SIMMONS' BLACK \$15.00
No. 21—SIMMONS' BLUE 21.00
No. 20—SIMMONS' RED 21.00
No. 22—SIMMONS' GREEN 21.00
One-quarter Gross in a Cardboard Box, Three Gross in a Case; Weight per Gross about 14 lbs.



Standard Hexagon Lumber; Paper Covered; ½x4½ inches.

No. 1361—BLACK \$16.80
No. 1521—BLUE 16.80
No. 1520—RED 16.80
Black, One-half Gross; Blue and Red, One-quarter Gross in a Cardboard Box; Weight per Gross about 10 lbs.



Dixon's Hexagon Lumber; Paper Covered; ½x4¼ inches.

No. 361—REGULAR GRADE BLACK \$15.00
No. 362—HARD GRADE BLACK 15.00
No. 365—SOFT GRADE BLACK 15.00
No. 521—BLUE \$21.00
No. 522—GREEN 21.00
No. 520—RED 21.00
No. 496—YELLOW 21.00

One-half Gross in a Cardboard Box; Weight per Gross about 10 lbs.

CRAYON HOLDERS.

No. 503—½x4¼ inches; Brass, Nickel Plated; Knurled Slide for Tightening Crayon in Holder; Will Hold Securely any ½ inch Hexagon Crayon \$4.00
One Dozen in a Cardboard Box, Three Dozen in a Carton; Weight per Dozen about ¾ lb.

SCHOOL CRAYONS.

School Crayons; WHITE; Weight per gross about 2½ lbs. \$0.25
One Gross in a Box; 100 Gross in a Case.



MUCILAGE.

SPONGE TOP MUCILAGE.
GLASS BOTTLES.

- No. 255—"GEM;" 2 oz. Bottles; Weight per dozen about 5 lbs.\$3.84
No. 260—"ELECTRIC;" 3 oz. Bottles; Weight per dozen about 7 lbs. 5.20
One Dozen in a Case.



STUDIO PASTE.

WHITE, NO BRUSHES INCLUDED.

- No. 268—4 oz., Flint Glass, Round Stand, with Brush; Weight per dozen about 9 lbs.\$2.88
One Dozen in a Box.

- No. 273—2 oz. Metal Screw Top, Glass Bottle; Weight per gross about 60 lbs.\$17.28
Three Dozen in a Case.



LIQUID GLUE.

LE PAGE'S.

For Wood, Leather, Glass,
Iron, Stone, Paper and
Cloth.

MUCILAGE.

LE PAGE'S.

INDIA INK.



HIGGINS' AMERICAN.

A Superior Liquid Drawing Ink in
One Ounce Bottles.

Regular.

- No. 2—Black; For General Use.\$4.50
Waterproof.

- No. 1—Black\$4.50
No. 3—Carmine 4.50
No. 4—Green 4.50
No. 5—Blue 4.50
No. 6—Yellow 4.50
No. 7—Orange 4.50
No. 8—Violet 4.50
No. 9—Brown 4.50

One Dozen in a Wood Box; Weight
per Dozen about 4 lbs.



Le Page's "Ready-for use."
Self-Sealing Tubes.

- No. R—"READY-FOR-USE,"
Le Page's, Liquid Glue.\$1.07
Weight per Dozen about 1½ lbs.
One-twelfth Dozen in Carton; Two
Dozen Cartons in a Cardboard Box,
with Handsome Show Card, One
Gross in a Case.



Gold Medal.

- Mucilage—2 oz. Cone Bottles,
with Cap and Brush...\$1.20
Weight per Dozen about 15 lbs.
One Dozen in a Case; Three Dozen
in a Large Case.

ERASERS.

ALL RUBBER.



Cut Full Size.

No. 7064—A. W. Faber's Eclipse Pencil Rubber, Small Size; 24 Pieces to the pound. \$2.52
One-half Pound in a Cardboard Box.



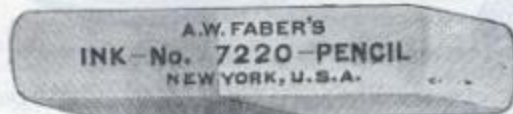
Cut Full Size.

No. 7049—Ink and Pencil Eraser; Small, Red Polished; Weight per dozen about $\frac{3}{4}$ lb. \$2.60



Cut Full Size.

No. 624—School Ink and Pencil Eraser; Small, Wood center, one dozen on a card; Weight per dozen about $\frac{1}{4}$ lb. \$1.32



Cut Full Size.

No. 7220—Ink and Pencil Eraser, Beveled Ends; Weight per dozen about $\frac{1}{2}$ lb. \$1.35
One Dozen in a Cardboard Box.



Cut Full Size.

No. 7081—Circular Eraser, Mounted Between Nickel Plated Discs, Fine Quality Red Rubber; For Erasing Pencil Marks Only. \$1.40
One Dozen on a Card, Six Dozen in a Carton.



No. 186—Circular Eraser, Mounted with Metal Ring in Center; Weight per gross about $3\frac{1}{4}$ lbs. \$4.00
Per Dozen

No. 52—Bicycle Eraser, Mounted on Nickel Plated Disc; Erases both Ink and Pencil Marks; Has a Fine Continuous Edge; Weight per dozen about $\frac{3}{4}$ lb. \$1.32
One Dozen on a Card.



No. 110—UNION; Double Bevel, Ink and Pencil Eraser; Weight per dozen about $\frac{1}{4}$ lb. \$1.45



No. 111—Emerald Pencil Eraser; Flat, Double Beveled; Made of a Green Erasive Compound; For Pencil Marks. \$1.32
No. 112—Ruby Rubber; Flat, Double Beveled; Made of a Red Erasive Compound; For Pencil Marks. 1.32

Weight per Dozen about $\frac{3}{4}$ lb.
One Dozen in a Cardboard Box.



Multiplex—Removes Pencil Marks without Smoothing; 12, 20, 30, and 60 Pieces to the pound. \$5.92
One Pound in a Cardboard Box.

THERMOMETERS.



S. H. Co.'s* Standard Grade.

NOTE.

*Thermometers vary in the number of degrees that they will register. Some will register Lower or Higher than others. We do not guarantee them to register exactly as shown on the scale in the cuts. The scale shown in cuts is approximate only.



S. H. Co.'s* Extra Grade.

- No. 608**—LENGTH 8 INCHES; SPIRIT; Graduated for Air Temperature; Heavy Tin Case, Black Enameled; Heavy Wrought Brass Scale, Black Oxidized Finish; Figures and Lines Stamped, Filled White; Weight per dozen about 4 lbs. \$6.00
- No. 610**—LENGTH 10 INCHES; SPIRIT; Graduated for Air Temperature; Heavy Tin Case, Black Enameled; Heavy Wrought Brass Scale, Black Oxidized Finish; Figures and Lines Stamped, Filled White; Weight per dozen about 5 lbs. 8.00

- No. 110**—LENGTH 10 INCHES; MERCURY; Graduated for Air Temperature; Heavy Tin Case, Black Enameled; Heavy Wrought Brass Scale, Silvered; Figures and Lines Stamped, Filled Black; Weight per dozen about 6 lbs. ...\$12.00
- No. 210**—LENGTH 10 INCHES; SPIRIT; Graduated for Air Temperature; Heavy Tin Case, Black Enameled Finish; Heavy Wrought Brass Scale, Silvered; Figures and Lines Stamped, Filled Black; Weight per dozen about 6 lbs.12.00

One-half Dozen in a Wood Box.

FURNITURE NAILS.



BRASS.

Solid Polished Brass Oval Heads; Steel Wire Point $\frac{5}{16}$ inch Long.

Diameter of Head $\frac{5}{16}$ inch.	Per 1000
No. 41 —1000 in a Box	\$2.00
No. F41 —50 in a Box	1.50



BRASS.

Diameter of Head $\frac{5}{16}$ inch.	Per 1000
No. 42 —1000 in a Box	\$1.40
No. F42 —50 in a Box	1.30



BRASS.

Diameter of Head $\frac{5}{16}$ inch.	Per 1000
No. 43 —1000 in a Box	\$1.20
No. F43 —50 in a Box	1.70



BRASS.

Solid Polished Brass Half-Round Head; Steel Wire Point $\frac{5}{16}$ inch Long. Diameter of Head $\frac{5}{16}$ inch.	Per 1000
No. 12 —1000 in a Box	\$1.30
No. F12 —50 in a Box	1.80

Solid Steel Oval Heads, Brass Plated, Polished; Steel Wire Point $\frac{5}{16}$ inches Long.

BRASS PLATED.

Diameter of Head $\frac{5}{16}$ inch.	Per 1000
No. 42BP —1000 in a Box....	\$1.40
No. F42BP —50 in a Box.....	1.90



BRASS PLATED.

Diameter of Head $\frac{5}{16}$ inch.	Per 1000
No. 43BP —1000—in a Box....	\$1.20
No. F43BP —50 in a Box.....	1.70

 $\frac{5}{16}$ inch Steel Head, Dead Black Enameled; $\frac{5}{16}$ inch Steel Wire Point; Broad Sent at Base of Head prevents the Sharp Edge from Cutting Gimp or Fibre.

METALENE.

Per Dozen Papers
No. 265F —Weight per dozen papers about 1 lb. ... \$3.30
50 Only in a Paper; One Dozen Papers in a Carton.

Weight per 1000 about 1 lb.

Nos. F41, F42, F42BP, F43, F43BP and F12, Twenty Boxes (1000) in a Carton.



STEEL STAMPS.



Name and Figure Stamps; Hand Made.

Forged from Special Tool Steel, Tempered, Natural Finish; Average Length 4 inches.

LETTERS.

	Per Letter
$\frac{1}{32}$ inch.....	\$0.60
$\frac{1}{24}$ inch.....	.50
$\frac{1}{20}$ inch.....	.40
$\frac{1}{16}$ inch.....	.30
$\frac{1}{12}$ inch.....	.30
$\frac{3}{32}$ inch.....	.30
$\frac{1}{10}$ inch.....	.30
$\frac{1}{8}$ inch.....	.30
$\frac{5}{32}$ inch.....	.36
$\frac{3}{16}$ inch.....	.40
$\frac{7}{32}$ inch.....	.50
$\frac{1}{4}$ inch.....	.60

FIGURES.

	Per Figure
$\frac{1}{32}$ inch.....	\$0.60
$\frac{1}{24}$ inch.....	.50
$\frac{1}{20}$ inch.....	.40
$\frac{1}{16}$ inch.....	.30
$\frac{1}{12}$ inch.....	.30
$\frac{3}{32}$ inch.....	.30
$\frac{1}{10}$ inch.....	.30
$\frac{1}{8}$ inch.....	.30
$\frac{5}{32}$ inch.....	.36
$\frac{3}{16}$ inch.....	.40
$\frac{7}{32}$ inch.....	.50
$\frac{1}{4}$ inch.....	.60

NOTE.—In ordering Steel Stamps, always mention for what purpose the Stamps are to be used.
INITIAL STAMPS: $\frac{1}{16}$ to $\frac{1}{4}$ inch, 40c per Letter; Other Sizes 25c Advance in List over Regular Name Stamps.
Extra Charge for Forging will be made on Stamps Less Than Four Letters.

STEEL FIGURES AND LETTERS.



Forged from Special
Tool Steel, Tempered;
Natural Finish.



Steel Figures: In Sets; Machine Made.

Size, inches	$\frac{1}{16}$	$\frac{1}{12}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per set							
about, lbs.....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{4}$	$2\frac{1}{4}$	$3\frac{1}{4}$	8
Per set	\$0.90	.90	.90	1.25	1.50	2.50	4.50

Steel Alphabets: In Sets; Machine Made.

Size, inches	$\frac{1}{16}$	$\frac{1}{12}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per set							
about, lbs.....	1	$1\frac{1}{4}$	1 $\frac{1}{2}$	$2\frac{1}{4}$	$3\frac{1}{4}$	$6\frac{1}{4}$	8
Per set	\$2.70	2.70	2.70	3.75	4.50	7.50	13.50

One Set Complete in Wood Box.

Extra Single Steel Figures: Machine Made.

Size, inches	$\frac{1}{16}$	$\frac{1}{12}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen							
about, lbs.....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$2\frac{1}{4}$	$3\frac{1}{4}$	$2\frac{1}{2}$
Per single dozen.....	\$1.80	1.80	1.80	2.16	3.00	4.80	7.20

Extra Single Steel Letters: Machine Made.

Size, inches	$\frac{1}{16}$	$\frac{1}{12}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
Weight per dozen							
about, lbs.....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$2\frac{1}{4}$	$3\frac{1}{4}$	$2\frac{1}{2}$
Per single dozen.....	\$1.80	1.80	1.80	2.16	3.00	4.80	7.20

Packed Loose.

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ALUMINUM LETTERS.

Two inch Stamped Aluminum Letters A and B, used in connection with Aluminum House Numbers.

	Per Dozen
No. A—Weight per dozen about $\frac{1}{4}$ lb.....	\$1.20
No. B—Weight per dozen about $\frac{1}{4}$ lb.....	1.20

One Dozen in a Box, packed with Silver Plated Escutcheon Pins.

HOUSE NUMBERS.

Showing Assortment.

Per Assortment

Aluminum Assortments, House Numbers, Consisting of Ten Dozen 3 inch Aluminum Numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 0; Silver Plated Brass Nails furnished with each Assortment; Weight per assortment about $1\frac{1}{2}$ lbs..... \$6.50
One Complete Assortment in a Show Case Box.

Per Dozen

3 inch Aluminum House Numbers, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 0; Silver Plated Brass Nails furnished with same; Weight per dozen about $\frac{1}{4}$ lb..... \$0.75
One Dozen in a Cardboard Box.

PULLEY BLOCKS.

Nos. 4, 5 and 6.

Sure Grip: Steel; Japanned Finish; With Wrought Hooks; Automatic Brake to prevent Backward Slipping.

Nos.....	3	4	5	6	4½	5½	6½
Capacity, lbs....	600	1000	1800	2500	3000	3500	5000
One Man can lift, lbs.....	300	350	400	450	600	700	850
Size Rope, in... ¾	¾	¾	¾	¾	¾	¾	¾
Wgt. each about, lbs.....	5	8	14	25	12	22	38
Each	\$3.00	5.50	7.00	8.50	10.00	12.00	14.00

THE ROPE IS NOT INCLUDED IN THE ABOVE PRICES. When Ordering, if Rope is wanted, Specify the Exact Distance Between the Lowest Starting Point and the Hook the Machine is suspended from.

Packed Loose.



PULLEY BLOCKS.



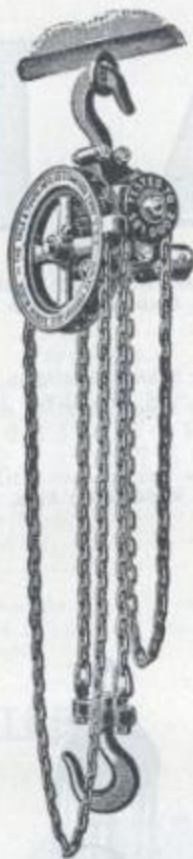
Weston Pattern: Differential or Direct; Malleable Frames; Cast Wheels; Wrought Hooks and Steel Chain.

Capacity, tons.....	$\frac{1}{4}$	$\frac{1}{2}$	1	$1\frac{1}{2}$	2
Will Hoist from Level on which operator stands, ft.	6	7	8	$8\frac{1}{2}$	9
Weight each about, lbs.	22	30	51	81	122
Each	\$18.00	21.00	28.00	36.00	45.00

±EXTRA HOIST per foot,
comprising 4-foot Chain. \$2.80 2.80 3.00 3.20 3.40

NOTE.—If Block is wanted to Lift Higher than shown above, Extra Chain must be Ordered; Four feet of Chain for every Foot of Extra Hoist.

Packed Loose.



Showing Duplex.

±YALE DUPLEX; Screw Geared; Malleable Frame; Cast Wheel; Wrought Hooks; Steel Gears and Chain.

Capacity, tons.....	$\pm\frac{1}{2}$	± 1	$\pm 1\frac{1}{2}$	± 2	± 3
Will hoist from level on which operator is standing, feet.....	8	8	8	8	10
Weight each complete about, lbs.....	43	57	76	104	200
Each.....	\$25.00	30.00	40.00	60.00	75.00
±EXTRA HOIST per foot,					
all chains included....	\$1.20	1.50	1.75	2.00	2.20
Capacity, tons.....	± 4	± 5	± 6	± 8	± 10
Will hoist from level on which operator is standing, feet.....	10	12	12	12	12
Weight each complete about, lbs.....	225	340	360	390	570
Each.....	\$95.00	140.00	180.00	210.00	275.00
±EXTRA HOIST per foot,					
all chains included....	\$2.40	3.00	3.75	4.00	4.25

One in a Wood Box.

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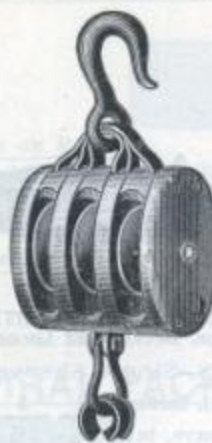
TACKLE BLOCKS.



No. 100.



No. 200.



No. 300.

VARNISHED, HARDWOOD SHELL, Riveted together; Japanned, Cast Iron Sheave; Wrought Iron Straps; Loose Hook and Becket; With Steel Roller Bushed Sheaves.

No. 100—Single Sheave; One-half with Becket.

	4	5	6	7	8	9	10	12
Length of Shell, inches.....	2 1/4	3	3 1/2	4 1/4	4 3/4	5 1/2	6 1/4	8
Diameter of Sheave, inches.....	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5 1/2
For Rope Diameter, inches.....	1 1/4	1 3/4	2	2 1/4	2 3/4	3	3 1/4	4
Length over all, inches.....	9 1/4	13	14	15	18 1/2	20	21 1/2	25
Weight each about, lbs.....	1 1/2	2 1/2	4	5 1/2	8 1/4	11	15	24 1/2
Each.....	\$1.20	1.25	1.50	1.70	2.25	2.50	3.50	5.30

No. 200—Double Sheave; One-half with Becket.

	4	5	6	7	8	10	12
Length of Shell, inches.....	2 1/4	3	3 1/2	4 1/4	4 3/4	6 1/4	8
Diameter of Sheave, inches.....	1 1/2	2	2 1/2	3	3 1/2	4 1/2	5 1/2
For Rope Diameter, inches.....	1 1/4	1 3/4	2	2 1/4	2 3/4	3 1/4	4
Length over all, inches.....	9 1/4	13	14	17	19	23	27
Weight each about, lbs.....	3 1/2	4 1/2	6 1/2	9 1/2	13	24	36
Each.....	\$2.25	2.35	2.85	3.35	4.15	6.00	9.20

No. 300—Triple Sheave; One-third with Becket.

	4	6	8	10	12
Length of Shell, inches.....	2 1/4	3 1/2	4 3/4	6 1/4	8
Diameter of Sheave, inches.....	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2
For Rope Diameter, inches.....	1 1/4	2	2 1/4	3 1/4	4
Length over all, inches.....	10	15	18 1/2	22 1/2	29
Weight each about, lbs.....	3 1/2	9 1/2	18	34	52
Each.....	\$3.25	4.40	6.00	8.50	13.20



WILCOX.

GALVANIZED, MALLEABLE IRON Shell; Cast Iron, Plain Bushed Sheaves; Wrought Iron Loose Hook.

Wileox; Single Sheave; All with Becket.

Nos.	5	7	9	13
Length of Shell, inches....	2 1/2	3	4	5
Diameter Sheave, inches....	1 1/2	2	2 1/2	3
For Rope Diameter, inches....	1 1/4	1 3/4	2	2 1/4
Length over all, inches....	5 1/4	7	8 1/4	10 1/2
Weight each about, lbs....	1 1/2	1	1 1/2	3 1/2
Each.....	\$0.30	.45	.85	1.10

Wileox; Double Sheave; One-half with Becket.

Nos.	6	8	10	14	16
Length of Shell, inches.....	2 1/2	3	4	5	6
Diameter of Sheave, inches....	1 1/2	2	2 1/2	3	3 1/2
For Rope Diameter, inches....	1 1/4	1 3/4	2	2 1/4	2 3/4
Length over all, inches.....	5 1/4	7	7 1/2	9 1/4	12 1/2
Weight each about, lbs.....	1	1 1/2	2 1/2	5	7
Each.....	\$0.50	.70	1.25	1.75	2.40

Packed Loose.

TACKLE BLOCKS.



HARTZ.

JAPANNED PRESSED STEEL SHELL, with Steel Braces or Pins; Cast Iron Plain Bushed Sheaves; Wrought Iron Straps, Becket and Loose Hook, with Link; All with Beckets.

No. HPS—Single Sheave.

Lgth. Shell, inches..	4	5	6
Diam. Sheave, in....	2 1/4	2 3/4	3 1/2
For Rope Diam., in..	1 1/2	2	2 1/2
Length over all, in..	9 1/2	12	13
Wt. each about, lbs.	1 1/4	3 1/4	4 1/2
Each	\$0.85	.90	1.10
Lgth. Shell, inches..	8	10	
Diam. Sheave, in....	5	6	
For Rope Diam., in..	1	1 1/4	
Length over all, in..	18	21	
Wt. each about, lbs.	10	18	
Each	\$1.65	2.75	

No. HPD—Double Sheave.

Lgth. Shell, inches..	4	5	6
Diam. Sheave, in....	2 1/4	2 3/4	3 1/2
For Rope Diam., in..	1 1/2	2	2 1/2
Length over all, in..	11 1/2	14	15
Wt. each about, lbs..	2 3/4	4 1/2	6 1/2
Each	\$1.60	1.75	2.00
Lgth. Shell, inches..	8	10	
Diam. Sheave, in....	5	6	
For Rope Diam., in..	1	1 1/4	
Length over all, in..	19 1/2	22	
Wt. each about, lbs..	14	27	
Each	\$2.85	4.50	

No. HPT—Triple Sheave.

Lgth. Shell, inches..	4	6	8
Diam. Sheave, in....	2 1/4	3 1/4	5
For Rope Diam., in..	1 1/2	2 1/4	3 1/2
Length over all, in..	11	15	19
Wt. Each about, lbs.	4	9 1/4	19 1/4
Each	\$2.15	2.90	4.25
Lgth. Shell, inches....	10		
Diam. Sheave, in....	6		
For Rope Diam., in..	1 3/4		
Length over all, in..	23 1/2		
Wt. each about, lbs..	36		
Each	\$6.25		

EDDY (New Pattern).

Steel Hook, Shell, Pin and Strap, Japanned, Regular Mortise, Plain Iron Bushed, with Becket.



No. EPS—Single Sheave.

Lgth. Block, in....	3 1/2	4	5
Diam. Sheave, in....	2	2 1/4	2 3/4
For Rope Diam., in..	3/4	1	1 1/4
Wt. each about, lbs.	3/4	1 1/4	2
Each	\$0.75	.85	.90
Lgth. Block, in....	6	7	8
Diam. Sheave, in....	3 1/4	4 1/4	4 3/4
For Rope Diam., in..	1 1/4	1 3/4	2
Wt. each about, lbs.	3	4 3/4	6 3/4
Each	\$1.10	1.30	1.65

No. EPD—Double Sheave.

Lgth. Block, in....	3 1/2	4	5
Diam. Sheave, in....	2	2 1/4	2 3/4
For Rope Diam., in..	3/4	1	1 1/4
Wt. each about, lbs.	1 1/4	2	3 1/4
Each	\$1.45	1.60	1.75
Lgth. Block, in....	6	7	8
Diam. Sheave, in....	3 1/4	4 1/4	4 3/4
For Rope Diam., in..	1 1/4	1 3/4	2
Wt. each about, lbs.	5	7 3/4	10 1/4
Each	\$2.00	2.40	2.85

No. EPT—Triple Sheave.

Lgth. Block, in....	3 1/2	4	5
Diam. Sheave, in....	2	2 1/4	2 3/4
For Rope Diam., in..	3/4	1	1 1/4
Wt. each about, lbs.	2	4	5
Each	\$2.00	2.15	2.25
Lgth. Block, in....	6	7	8
Diam. Sheave, in....	3 1/4	4 1/4	4 3/4
For Rope Diam., in..	1 1/4	1 3/4	2
Wt. each about, lbs.	7	11	15
Each	\$2.90	3.50	4.35

Packed Loose.

RUBBER PACKING.

-1034-

TRADE MARKS:
"KOOCHOOK" AND
"BALTIC,"
REG.



Koo-Chook High Grade Packing Recommended for all Purposes where a Lasting and Tight Joint Packing is Required.

One Ply of Cloth for every 1/16 inch in Thickness; Each Cloth whether used as an Insertion or on the Outside counts as One Ply.

Sheet Packing.

KOO-CHOOK*: Cloth Insertion Packing.

Thickness, inch	3/32	1/8	3/16	1/4
Wgt. per sq. yard about, lbs.	8	12	15	20

2-Ply: Per lb.	.58	.55		
3-Ply: Per lb.			.55	
4-Ply: Per lb.				.55

In Rolls, One Yard Wide and about Twenty Yards Long; Weight per Roll about 250 lbs.

BALTIC*: Cloth Insertion Packing.

Thickness, inch	1/16	3/32	1/8	3/16	1/4
Wgt. per sq. yard about, lbs.	6	8	12	15	20

1-Ply: Per lb.	\$0.60	.57			
2-Ply: Per lb.			.55		
3-Ply: Per lb.				.55	
4-Ply: Per lb.					.55

In Rolls, One Yard Wide and about Twenty Yards Long; Weight per Roll about 250 lbs.

KOO-CHOOK*: Red Sheet Packing; 36 Inches Wide.

For Steam, Air or Water Joints; Made from a Red Rubber Compound; Makes a Perfect Joint, and is Economical; Expansion and Superheated Steam Joints do not affect or shorten its term of service; It means a Saving to the user; Also made with Brass Wire, Lead and other Metal Insertions.

	Per Pound
1/16 inch Thick	\$1.00
1/8 inch Thick	1.00
3/16 inch Thick	1.00

In Rolls of about 250 lbs.

S. H. Co's.* Red Special Sheet Packing.

Made of a Red Rubber Compound which has Life and Strength to give Satisfaction for either Steam, Water or Air Joints; makes a Perfect Joint; Will Last Indefinitely.

	Per Pound
1/16 inch Thick	\$1.00
1/8 inch Thick	1.00
3/16 inch Thick	1.00

Full Rolls 36 inches Wide, Burlapped; Weight per Roll about 250 lbs.



KOO-CHOOK*: Square Piston Packing.

Square Piston Rubber Packing; Coarse Duck.

Inches	3/8	1/2	3/4	1
Wgt. per roll about, lbs.	1 1/4	2 1/4	6	10
Per lb.	\$0.85	.85	.85	.85

Fifteen Feet in a Roll.

ASBESTOS PACKING.



Piston on Reels.

Inches	1/4	3/8	1/2	5/8	3/4
Per lb.	\$0.40	.40	.40	.40	.40

25 and 50 lb. Reels.

Wick Packing in Balls.

Pounds in a Ball	1/4	1/2	1
Per lb.	\$0.40	.40	.40

25 and 50 lb. Boxes.

GENUINE SPIRAL PACKING.



Made of a Combination of Rubber and Cotton Fabrics; Made so that by Cutting off a Section, Ring of Any Size can be Formed; The Diameter Varies with the Thickness.

Thickness, inches	1/8	3/16	1/4	5/16
Wgt. box of 12 ft. about, lbs.	1 1/2	1 1/2	1 1/2	1 1/2
Per lb.	\$1.20	1.20	1.20	1.20

Thickness, inches	3/8	7/16	1/2	9/16
Wgt. box of 12 ft. about, lbs.	1 1/2	1 1/2	1 1/2	1 1/2
Per lb.	\$1.20	1.20	1.20	1.20

Thickness, inches	5/8	3/4
Wgt. box of 12 ft. about, lbs.	3 1/4	5 1/4
Per lb.	\$1.20	1.20

12 Feet in a Cardboard Box.

Made of a Combination of Rubber and Cotton Fabrics.



Elastic Ring Packing.

Thickness, inch	1/4	5/8	1/2	5/8	3/4
Per lb.	\$1.20	1.20	1.20	1.20	1.20



Sectional Ring Packing.

Thickness, inch	1/4	5/8	1/2	5/8	3/4
Per lb.	\$1.20	1.20	1.20	1.20	1.20

Made to Order Only; Give Piston Rod and Stuffing Box Measurements, and State whether to be Used for Steam, Water or Ammonia.

From One Week to Ten Days required to make up and fill Orders for Ring Packing. After One Lot has been received, the Order may be Duplicated by simply Giving the Numbers on the Boxes.

HEMP PACKING.



No. 1—LONG FIBRE; Pure; $\frac{3}{4}$ inch in Diameter.....	Per Pound
No. 2—SHORT FIBRE; Pure; $\frac{3}{4}$ inch in Diameter.....	\$0.25
Italian; BEST QUALITY; $\frac{3}{4}$ inch in Diameter.....	.20
	.30

Weight per Coil about 35 lbs.

About 160 feet to a Coil.

WASTE.



Cotton; Machined.

WHITE.

Nos.	<u>1</u>	<u>2</u>	<u>3</u>
	Best	Medium	Regular
Per lb.	\$.....		

COLORED.

Nos.	<u>A</u>	<u>B</u>	<u>C</u>
	Best	Medium	Regular
Per lb.	\$.....		

±WOOL—Machined.

Nos.	<u>X</u>	<u>Y</u>	<u>Z</u>
	Best	Medium	Regular
Per lb.	\$.....		

Put up in Pressed Bales of about 50, 100 and 500 lbs. each. Always sold by Gross Weight of Bales.

-1037-

CANVAS BELTS.**CHESAPEAKE RED CANVAS STITCHED BELTING.**

Made of 32 ounce Tightly Woven Duck; Closely Stitched; Well Stretched.

Canvas Stitched Belts are fast replacing Rubber Belts owing to the difference in price. The Strength is Due to the Quality and Weight of Duck.

List Adopted January 20, 1904.

		1½	2	2½	3	3½	4	4½	5	6	7	8		
4-ply,	Width, inches.....	18	25	31	38	44	50	56	63	75	88	100		
	Wt. per 100 ft. about, lbs..													
	Per foot.....	\$0.15	.20	.25	.30	.35	.40	.45	.50	.60	.70	.80		
4-ply,	Width, inches.....				9	10	11	12	13	14	15			
	Wt. per 100 ft. about, lbs..				113	125	138	150	163	175	188			
	Per foot.....				\$0.90	1.00	1.10	1.20	1.37	1.47	1.58			
6-ply,	Width, inches.....	3	3½	4	4½	5	6	7	8	9	10	11	12	
	Wt. per 100 ft. about, lbs..	55	65	75	84	94	112	132	150	168	188	207	225	
	Per foot.....	\$0.44	.51	.58	.65	.73	.87	1.02	1.16	1.31	1.45	1.60	1.74	
6-ply,	Width, inches.....	13	14	15	16	18	20	22	24	26	28	30	32	
	Wt. per 100 ft. about, lbs..	244	263	281	300	336	375	414	450	488	526	562	600	
	Per foot.....	\$1.99	2.13	2.29	2.44	2.74	3.05	3.35	3.65	4.15	4.47	4.79	5.10	
8-ply,	Width, inches.....	6	8	10	12	14	15	16	18	20	22	24	26	28
	Wt. per 100 ft. about, lbs..	150	200	250	300	350	375	400	450	500	550	600	650	700
	Per foot.....	\$1.14	1.52	1.90	2.28	2.79	3.00	3.19	3.59	3.99	4.39	4.79	5.43	5.85
10-ply,	Width, inches.....	30	32	34	36	38	40	42	44	46	48	50		
	Wt. per 100 ft. about, lbs..	750	800	850	900	950	1000	1050	1100	1150	1200	1250		
	Per foot.....	\$6.27	6.69	7.11	7.52	7.94	8.36	8.58	9.58	10.04	10.49	10.94	11.40	

A full Roll of Canvas Belting contains about 450 feet, but Will be Cut in Lengths to Suit Customer.

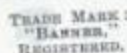
CHESAPEAKE CANVAS ENDLESS THRESHER BELTS.

Made of 32 ounce Tightly Woven Duck; Closely Stitched; Well Stretched.

		6	7	8	9				
4-ply,	Width, inches.....					4 $\frac{1}{2}$	5	6	7
	Wt. per 100 ft. about, lbs..	75	88	100	113				
	Per foot.....	\$0.60	.70	.80	.90				
5-ply,	Width, inches.....					5	6	7	8
	Wt. per 100 ft. about, lbs..					112	132	150	168
	Per foot.....					\$0.87	1.02	1.16	1.31

Made and Sold only in Lengths 120, 130, 140 and 150 feet.

Actual Lengths of Canvas Thresher Belts are 3 feet less than Lengths given, 3 feet being consumed in Splicing.



LEATHER BELTING.

All Belting will be furnished Riveted, unless otherwise specified.
For List of Double Belts, Double the Standard List.

Standard List, Adopted November 21st, 1906.

	1	1½	2	2½	3	3½	4	4½	5	5½	6	7	8	9	10	11	12
Width, inches	1	1½	2	2½	3	3½	4	4½	5	5½	6	7	8	9	10	11	12
Per Running Foot	\$0.24	.30	.36	.42	.48	.54	.60	.66	.72	.78	.84	.90	.96	1.02	1.08	1.14	1.20

FOR LIST OF DOUBLE BELTS, DOUBLE THE STANDARD LIST.

FOR LIST OF DOUBLE BELTS, DOUBLE THE STANDARD LIST.		Per Running Foot
No. CSL—CLEARHIDE SHORT LAP, SINGLE; Not Waterproofed; Our First Grade; Made Entirely from Center Stock, Strictly Short Lap Throughout. A Good Heavy Belt and will stand comparison with any High Grade Belt. Uniform in the Thickness; Especially Adapted for Hard Service and High Speed; Made of Leather which has been Carefully Selected and Only the Choicest Parts are Used, and is Guaranteed to be Genuine Old Process Oak Bark Tannage; Weight per square foot 14½ ozs.....		\$.....
No. CX—CLEARHIDE SHORT LAP, EXTRA HEAVY, SINGLE; Not Waterproofed; Same Grade as No. CSL; Made from Center Stock. For this Belt only the Extra Heavy Hides are used. Probably only one in Twenty would be Suitable to go in the Extra Heavy Clearhide Short Lap Belt; Weight per square foot 16 ozs.		\$.....
No. CD—CLEARHIDE SHORT LAP, DOUBLE; Not Waterproofed; Same as No. CX, except it is a Double or Two-ply Belt; Thoroughly Cemented or Glued Together; Weight per square foot 28 ozs.....		\$.....
All of the above are Strictly Guaranteed for the Most Severe Work.		
No. MCS—MOUND CITY STAR, OAK TANNED, SINGLE; Not Waterproofed; The Next Grade to Clearhide Short Lap; Cut from the Side Stock instead of the Center Stock; For Ordinary Work this makes an Unusually Good Belt, but could not be used for the heaviest kind of work; Weight per square foot 13 ozs.		\$.....
No. AW—AGRICULTURAL, LIGHT, SINGLE; WATERPROOFED; Made Only from 1 to 4 inches Wide and should be used for the Lightest Work only; Weight per square foot 11 ozs.....		\$.....
No. CXR—CLEARHIDE HEAVY RAWHIDE, SINGLE; Made Entirely from the Strongest Part of a Hide; As Strong a Single Belt as it is possible to Manufacture; Is Stronger than Oak Tanned Belts, Adheres Closer to Pulleys, and Will Transmit More Power; Weight per square foot 16 ozs.....		\$.....
No. CLDR—CLEARHIDE LIGHT RAWHIDE, DOUBLE; Has the same features as No. CXR, only this Belt is made of Two Light Single Belts into a Light Double one; Weight per square foot 18 ozs....		\$.....
No. CDR—CLEARHIDE RAWHIDE, DOUBLE; Made of Two Plies of Regular Weight Single Rawhide Belts; Is Positively the Strongest Hide Belt Manufactured; Weight per square foot 32 ozs.....		\$.....
CUTTING AND FINISHING BELTS TO RAWHIDE BELTS ALSO.		

LISTS OF LEATHER APPLY TO RAWHIDE BELTS ALSO.

300 to 400 Feet in a Roll.

AVERAGE WEIGHT OF SINGLE LEATHER BELTING.

AVERAGE WEIGHT OF SINGLE LEATHER BELTING.									
	1	1½	2	2½	3	3½	4	5	6
Inches	1	1½	2	2½	3	3½	4	5	6
Weight per 100 feet about, lbs.....	6	9	12	15	18	21	25	35	45
Inches	7	8	9	10	12	14	16	20	22
Weight per 100 feet about, lbs.....	53	60	68	75	90	105	120	135	165

For Double Belts, Double the above Weights.

Leather Belting can be made Endless without charge, except what Leather is necessary to make the splice. Splices on Single Belts are as long as the Belt is wide. Splices on Double Belts up to and including 10 inch, are 3 inches longer than the Belt is wide; 12 inches and over, as long as the Belt is wide.

LACE LEATHER.



	Per Square Foot
<u>BANNER</u> *, RAWHIDE; Assorted 15 to 23 Square Feet	\$0.56
<u>No. 1W</u> —WYOMING; Tanned Yellow, Assorted, 15 to 25 Square Feet .....	.56
<u>WIZARD</u> —RAWHIDE; Assorted, 12 to 20 feet to the Side, .....	.44
Weight per 100 Square Feet about 40 lbs.	

CUT LACING.



	Rawhide.					
Width, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$
Wgt. per 100 ft. about, lbs.	$\frac{3}{4}$	$\frac{5}{8}$	1	1 $\frac{1}{4}$	2	2 $\frac{1}{2}$
Per 100 feet.	\$1.00	1.25	1.50	2.00	2.75	3.25
100 Feet in a Bundle: Assorted Lengths	3 $\frac{1}{2}$ to 7 $\frac{1}{2}$ Feet.					

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LACE LEATHER CUTTERS.

Malleable Iron Body,
Japanned; Best Grade
Tool Steel Blade, Polish-
ed; Nickel Plated Set
Screw.

Empire.

Per Dozen

No. 60—To Cut Lace from $\frac{3}{16}$ to $\frac{3}{4}$ inch Wide;
Weight per dozen about $2\frac{1}{2}$ lbs. \$5.00
One Dozen in a Cardboard Box.

WASHER CUTTERS.

Cast Steel Shank and Hand
Piece; Polished Taper File Steel
Blades; With Vise Setting Ad-
justment.

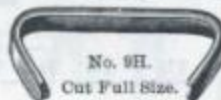
Per Dozen

No. 313—To Cut Washers UP TO 3 INCHES in
Diameter; Weight per dozen about $4\frac{1}{2}$ lbs. \$11.00
No. 315—To Cut Washers UP TO 7 INCHES in Di-
ameter; Weight per dozen about 8 lbs. 14.00
One Dozen in a Cardboard Box.

BELT COUPLINGS.

Cast Steel, Polished; Thread-
ed Inside at Each End to Screw
on Belt; Adapted for Round and
Twisted Leather Belts.

For Belts Sizes, inches. $\frac{1}{4}$ $\frac{5}{16}$ $\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$
Length, inches $\frac{3}{4}$ $1\frac{1}{8}$ $1\frac{1}{4}$ $1\frac{3}{4}$ $2\frac{1}{4}$ $2\frac{3}{4}$
Wgt. per doz. about, lbs. $\frac{3}{4}$ $\frac{3}{4}$ $\frac{1}{2}$ $\frac{3}{4}$ $1\frac{1}{2}$ 2
Per dozen \$2.00 2.50 3.00 4.00 6.00 9.00
One Dozen in a Wood Box.

BELT HOOKS.

No. 9H.
Cut Full Size.

Pointed.
Cut From Flat
Steel Wire.

Nos.	15H	14H	13H	12H	11H
Size, inches	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{9}{16}$	$\frac{7}{8}$	$1\frac{1}{8}$
Wgt. 100 about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{2}$
Per 100	\$0.20	.24	.26	.28	.30

Nos.	10H	9H	8H	7H	6H
Size, inches	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Wgt. 100 about, lbs.	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	$1\frac{1}{4}$	2
Per 100	\$0.35	.40	.50	.60	.85

Nos.	5H	4H	3H	2H
Size, inches	$2\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{1}{2}$	$2\frac{1}{4}$
Wgt. 100 about, lbs.	$2\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{3}{4}$	3
Per 100	\$1.10	1.40	1.60	2.00

Nos. 15H to 5H, Two Hundred and Fifty. Nos. 4H to 2H,
One Hundred in a Cardboard Box.

BELT STUDS.

No. 2LX

1LX

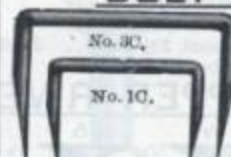
0LX

Cuts Full Size.

Stamped from Gun Me-
tal; Cross Ends have
Rounded Corners to Pre-
vent Cutting the Belt and
Insure Smooth Surface.

Nos.	2LX	1LX	0LX
Weight per 100 about, lbs.	$\frac{1}{2}$	$\frac{3}{4}$	1
Per Box of 100	\$1.25	1.65	2.00

One Hundred in a Cardboard Box.

BELT FASTENERS.

No. 3C.

No. 1C.

Cuts Full
Size.

No. 2C.

No. 0C.

COVEL PATTERN.

Cut from Steel Wire, Coppered.

No. 0C—For Single Leather and Light Rubber Belts;
No. 1C—For All Belts Less than 4-ply; No. 2C—For
Belts from 4 to 6-ply; No. 3C—For Belts from 6 to 10-ply.
Nos. 0C 1C 2C 3C
Wgt. Box of 200 about, lbs. $\frac{1}{2}$ $\frac{3}{4}$ 1 $1\frac{1}{2}$
Per 100 \$0.25 .25 .25 .25
Two Hundred in a Cardboard Box.



3 in. 4 Ply

Coppered Mal-
leable Iron.
For Single
Leather Belts.

No. 15F.
STANDARD.

Nos.	1F	2F	15F	16F	22F	23F
For 1, 2, $2\frac{1}{2}$ and 4 inch Belts; Weight per 100 about 2 lbs.						
No. 2F—For $1\frac{1}{2}$, 3, $3\frac{1}{2}$ and 6 inch Belts; Weight per 100 about 3 lbs.						
For 4-ply Rubber and Double Leather Belts. No. 3F—For 2 inch Belts; Weight per 100 about 7 lbs.						
No. 15F—For 3 inch Belts; Weight per 100 about 12 lbs.						
No. 16F—For 4 inch Belts; Weight per 100 about 16 lbs.						
For 5 and 6-ply Rubber and Heavy Double Leather Belts. No. 22F—For 3 inch Belts; Weight per 100 about 20 lbs.						
No. 23F—For 4 inch Belts; Weight per 100 about 24 lbs.						

For Belts Wider than above specified, use two or
more Fasteners.
Fifty in a Cardboard Box.

BELT FASTENERS.

Showing Method of Use.

Stamped from Cold Rolled Steel, Plain Finish; The Zig Zag Position of the Teeth Insures a Strong, Durable Joint.

- No. 1AAA—FOR SINGLE LEATHER, 3-ply Rubber, or Cotton Belts, $\frac{1}{2}$ to 4 inches Wide; Weight per 100 about $\frac{3}{4}$ lb. \$1.20**
No. 2AAA—FOR SINGLE OR LIGHT Double Leather, 4-ply Rubber, or Cotton Belts, 1 to 6 inches Wide; Weight per 100 about 1 $\frac{1}{4}$ lbs. 2.00
No. 3AAA—FOR DOUBLE LEATHER, 4 to 6-ply Rubber, or Cotton Belts, 1 inch Wide and Larger; Weight per 100 about 2 $\frac{1}{4}$ lbs. 3.40
 One Hundred in a Cardboard Box.

WIRE BELT LACING.

Drawn from a Composition of Metals which is very Tough and Pliable.

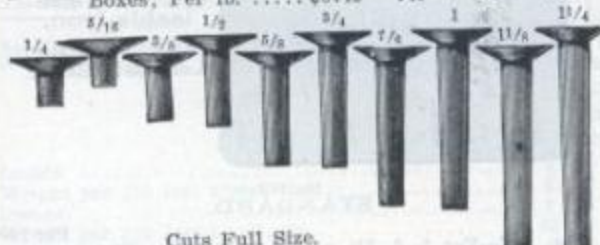
- No. 0L—For Belts 3 inches Wide and Smaller; Weight per 1,000 feet about 5 lbs. \$20.00**
No. 1L—For Belts from 3 to 5 inches Wide; Weight per 1,000 feet about 6 lbs. 20.00
No. 2L—For Belts 5 to 15 inches Wide; Weight per 1,000 feet about 10 lbs. 20.00

Fifty Foot Coil in a Carton.

COPPER RIVETS AND BURS

Cuts Full Size.

Length, inches	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	Assorted % to %	% to 1
No. 7/H—IN HALF POUND												
Boxes; Per lb.	\$0.52	.53	.52	.52	.52	.52	.52	.52	.52	.52	.55	.55
No. 7/O—IN ONE POUND												
Boxes; Per lb.	\$0.49	.49	.49	.49	.49	.49	.49	.49	.49	.49	.52	.52



Cuts Full Size.

Length, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	Assorted % to %	% to 1
No. 8/H—IN HALF POUND												
Boxes; Per lb.	\$0.53	.53	.53	.53	.53	.53	.53	.53	.53	.53	.56	.56
No. 8/O—IN ONE POUND												
Boxes; Per lb.	\$0.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.53	.53
Length, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$	Assorted % to %	% to 1
No. 9/H—IN HALF POUND												
Boxes; Per lb.	\$0.55	.55	.55	.55	.55	.55	.55	.55	.55	.55	.58	.58
No. 9/O—IN ONE POUND												
Boxes; Per lb.	\$0.52	.52	.52	.52	.52	.52	.52	.52	.52	.52	.55	.55

COPPER BURS ONLY.

No. 7—BURS ONLY; In
 Half Pound Boxes \$0.52



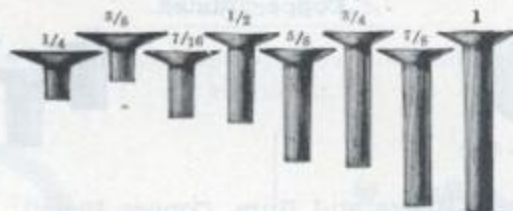
No. 8—BURS ONLY; In
 Half Pound Boxes \$0.53
 Cuts Full Size.



No. 9—BURS ONLY; In
 Half Pound Boxes \$0.55

-1041-

COPPER RIVETS AND BURS.



Length, inches	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	—Assorted—	
No. 10/H—IN HALF POUND Boxes; Per lb.	\$0.57	.57	.57	.57	.57	.57	.57	.57	$\frac{3}{8}$ to $\frac{1}{2}$	$\frac{1}{2}$ to 1
No. 10/O—IN ONE POUND Boxes; Per lb.	\$0.54	.54	.54	.54	.54	.54	.54	.54	.57	.57



Length, inches	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$
No. 12/H—IN HALF-POUND Boxes; Per lb.	\$0.61	.61	.61

Length, inches	$\frac{5}{8}$	Assorted $\frac{3}{8}$ to $\frac{1}{2}$
No. 12/H—IN HALF-POUND Boxes; Per lb.	\$0.61	.64

Length, inches	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$
No. 12/O—IN ONE POUND Boxes; Per lb.	\$0.58	.58	.58

Length, inches	$\frac{5}{8}$	Assorted $\frac{3}{8}$ to $\frac{1}{2}$
No. 12/O—IN ONE POUND Boxes; Per lb.	\$0.58	.61

BIFURCATED OR SLOTTED CLINCH RIVETS.



Soft Steel, Copper Plated; Self-clinching; Do not require Burs.

No. 50/S.

Length, inches	$\frac{4}{16}$	$\frac{5}{16}$	$\frac{6}{16}$	$\frac{7}{16}$	$\frac{8}{16}$	$\frac{10}{16}$
Per dozen Boxes	\$0.48	.48	.52	.52	.52	.57

50 Rivets in a Cardboard Box, with Rivet Holder; 12 Boxes in a Carton; Weight per Carton about 1 1/2 lbs.

Per Dozen Boxes

No. 9—ASSORTED; 100 Rivets in a Box, 3/16 to 1/2 inch

100 Rivets Assorted in a Cardboard Box, with Rivet Holder; 12 Boxes in a Carton; Weight per Carton about 3 lbs.

Cuts Full Size.



Length, inches	$\frac{3}{4}$	$\frac{7}{8}$	1
No. 5/H—IN HALF-POUND Boxes; Per lb.	\$0.52	.52	.52
No. 5/O—IN ONE POUND Boxes; Per lb.	\$0.49	.49	.49

COPPER BURS ONLY.



	Per Pound
No. 10—BURS ONLY; In Half-Pound Boxes	\$0.57
No. 12—BURS ONLY; In Half-Pound Boxes	.61
No. 14—BURS ONLY; In Half-Pound Boxes	.52

Cuts Full Size.

COPPER RIVETS AND BURS.



In 1/4-lb. Papers. Per Doz. Papers

No. 84—ASSORTED No. 8, 3/8 to 1/2-inch	\$1.74
No. 94—ASSORTED No. 9, 3/8 to 1/2-inch	1.80

One Dozen Papers in a Package.

IRON RIVETS AND BURS.

Copper Plated.



Cut shows No. 7 Bur



No. 7.

Iron Rivets and Burs, Copper Plated.

Per Pound

No. 7—ASSORTED, $\frac{3}{8}$ to $\frac{3}{4}$ inch; In $\frac{1}{2}$ -lb. Papers.....	\$0.43
No. 8—ASSORTED, $\frac{3}{8}$ to $\frac{3}{4}$ inch; In $\frac{1}{2}$ -lb. Papers.....	.44
No. 9—ASSORTED, $\frac{3}{8}$ to $\frac{3}{4}$ inch; In $\frac{1}{2}$ -lb. Papers.....	.45



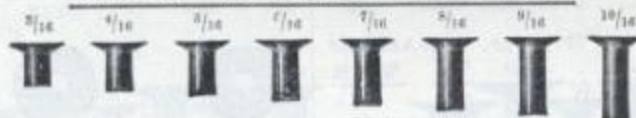
Iron Rivets and Burs, Copper Plated.

Per Dozen Papers

No. 7CP—ASSORTED, $\frac{3}{8}$ to $\frac{3}{4}$ inch; In $\frac{1}{4}$ -lb. Papers.....	\$1.41
No. 8CP—ASSORTED, $\frac{3}{8}$ to $\frac{3}{4}$ inch; In $\frac{1}{4}$ -lb. Papers.....	1.44
No. 9CP—ASSORTED, $\frac{3}{8}$ to $\frac{3}{4}$ inch; In $\frac{1}{4}$ -lb. Papers.....	1.47

One Dozen Papers in a Package.

IRON TUBULAR RIVETS.

No. 1 Size. $\frac{9}{64}$ -inch. In Cartons of 12 Boxes each.

No. 50 —JAPANNED; 50 Rivets in each Box....	} Size, inches	$\frac{3}{16}$	$\frac{4}{16}$	$\frac{5}{16}$	$\frac{6}{16}$	$\frac{7}{16}$	$\frac{8}{16}$	$\frac{9}{16}$	$\frac{10}{16}$
No. 50C—COPPERED; 50 Rivets in each Box....		\$0.68	.68	.68	.72	.78	.86	.94	1.00
No. A—JAPANNED; 50 Rivets in each Box....	} Assorted	$\frac{3}{16}$ to $\frac{1}{2}$ -inch.							
No. E—COPPERED; 50 Rivets in each Box....		Per dozen boxes							
No. C—JAPANNED; 50 Rivets in each Box....	} Assorted	$\frac{1}{4}$ to $\frac{5}{8}$ -inch.							
No. G—COPPERED; 50 Rivets in each Box....		Per dozen boxes							
No. B—JAPANNED; 100 Rivets in each Box....	} Assorted	$\frac{3}{16}$ to $\frac{1}{2}$ -inch.							
No. F—COPPERED; 100 Rivets in each Box....		Per dozen boxes							
No. D—JAPANNED; 100 Rivets in each Box....	} Assorted	$\frac{1}{4}$ to $\frac{5}{8}$ -inch.							
No. H—COPPERED; 100 Rivets in each Box....		Per dozen boxes							

50 Rivets in a Cardboard Box; Weight per Carton about 1½ lbs.; 100 Rivets in a Cardboard Box; Weight per Carton about 3 lbs.

In Boxes of 1,000 Each.

No. 1 —JAPANNED, $\frac{9}{64}$ -inch Diameter	} Size, inches	$\frac{3}{16}$	$\frac{4}{16}$	$\frac{5}{16}$	$\frac{6}{16}$	$\frac{7}{16}$	$\frac{8}{16}$	$\frac{9}{16}$	$\frac{10}{16}$
No. 1C—COPPERED, $\frac{9}{64}$ -inch Diameter		\$0.95	.95	.95	1.05	1.15	1.25	1.35	1.45
No. 3 —JAPANNED, $\frac{3}{16}$ -inch Diameter	} Size, inches	$\frac{5}{16}$	$\frac{6}{16}$	$\frac{7}{16}$	$\frac{8}{16}$	$\frac{9}{16}$	$\frac{10}{16}$		
No. 3C—COPPERED, $\frac{3}{16}$ -inch Diameter		\$1.85	1.95	2.05	2.15	2.25	2.35		

TRADE MARK:
"KLANCHER"
REGISTERED

MT



RIVETERS.

Riveters can be Used Only in Connection with Tubular Rivets. No Punch or Rivet Set Required.



SIMMONS'.

No. 4—Cast Iron, Japanned, with Raised Gilt Finish Letters, Polished Steel Plunger and Set; Oil Tempered Coil Spring; Height 6½ inches; Base 5⁹/₁₆ x 1¹⁵/₁₆ inches; Weight per dozen about 48 lbs. \$12.00

One-twelfth Dozen in a Cardboard Box.



No. M—MONARCH; Malleable Iron Handle; Balance Cast Iron; Steel Plunger; 6 inches High, 7 inches Long; Weight per dozen about 15 lbs. \$15.00

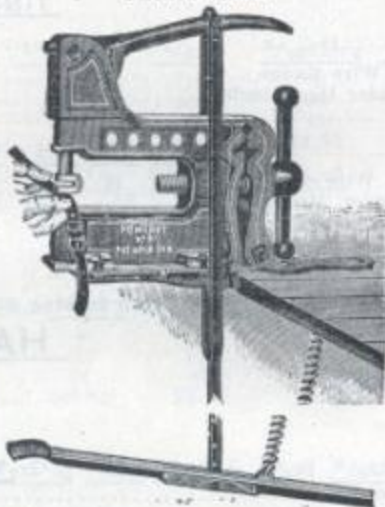
One-quarter Dozen in a Cardboard Carton.



Per Dozen

No. 500—"LITTLE GIANT" Riveters; Cast Iron, Japanned; Steel Plunger; 6 inches High, Base 11¾ inches Long; Weight per dozen about 42 lbs. \$19.50

Packed Loose.



Per Dozen

No. J301¾—Japanned; 9 inches High, 10¼ inches Long, with Attachments for Riveting Loops on Straps, also Pipe Vise with Steel Jaws; With Foot Power; Weight per dozen about 240 lbs. \$189.00

Packed Loose.

COTTER PIN EXTRACTORS.



Per Dozen

No. 10—Tool Steel, Japanned, with Blued Ends; Length over all 8 inches; Weight per dozen about 2¼ lbs. . \$6.00

One Dozen in a Cardboard Box.

IRON RIVETS.



BLACK IRON RIVETS.

BLACK IRON RIVETS.															
													8	10	12
Ounces													13 3/4	13	12 3/4
Diameter, Wire Gauge													5/32	11/64	3/16
Length Under Head, inches													\$0.20	.22	.24
Per 1,000															
Pounds	1	1 1/4	1 1/2	1 3/4	2	2 1/2	3	4	5	6	7	8	10	12	
Diameter, Wire Gauge	11 3/4	11	10 3/4	10	9 3/4	9	8 3/4	7 3/4	6 3/4	6	5 3/4	4 3/4	4	3	
Length Under Head, in.	13/64	7/32	15/64	1/4	17/64	9/32	5/16	11/32	3/8	25/64	13/32	7/16	15/32	1/2	
Per 1,000	\$0.27	.29	.33	.37	.42	.55	.60	.76	.90	1.08	1.26	1.44	1.75	1.96	

TINNED IRON RIVETS.

TINNED IRON															8	10	12
Ounces															13 3/4	13	12 3/4
Diameter, Wire Gauge															5/32	11/64	3/16
Length Under Head, inches															\$0.28	.31	.35
Per 1,000																	
Pounds	1	1 1/4	1 1/2	1 3/4	2	2 1/2	3	4	5	6	7	8	10	12			
Diameter, Wire Gauge	11 3/4	11	10 3/4	10	9 3/4	9	8 3/4	7 3/4	6 3/4	6	5 3/4	4 3/4	4	3			
Length Under Head, in.	13/64	7/32	15/64	1/4	17/64	9/32	5/16	11/32	3/8	25/64	13/32	7/16	15/32	1/2			
Per 1,000	\$0.42	.48	.55	.64	.72	.83	1.05	1.36	1.65	1.98	2.31	2.64	3.25	3.76			

1,000 in a Package.

For making Stove Pipe, 1 and 1 1/4 lbs. are used.

HAME RIVETS.



No. 7—Hame Rivets.

	7/8	1
Size, inches	\$0.21 1/2	.21
Per pound		

IRON RIVETING BURS.



No. 7.



No. 8.



No. 9.

Tinned Iron.

	7	8	9
For Rivets, Nos.			
Size of Hole, inches	1/4	3/4	1/4
Outside Diameter, inches	1/2	7/16	3/4
Gauge of Iron	16	18	18
Number in a lb., about	350	525	620
Per lb.	\$0.43	.44	.45



Showing Burr for 3/16 in. H. It.



Showing Burr for 1/4 in. Bolt.

Wrought Iron, Self-Color.

	3/16	1/4
For Bolt, inches		
Size of Hole, inches	13/64	17/64
Outside Diameter, inches	1/2	3/4
Gauge of Iron, Number	18	18
Number in a lb., about	450	300
Per lb.	\$0.28	.29

One Pound in a Package.

Cuts Full Size.

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SPRING COTTERS.



Cuts Full Size.
Half-round Spring Wire; Natural Finish.
Length is from Point to Neck under Eye.

IN BOXES.

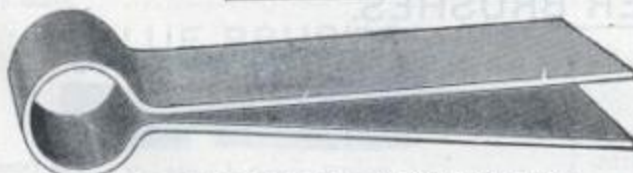
Size.....	$\frac{3}{32} \times \frac{3}{4}$	$\frac{3}{32} \times 1$	$\frac{1}{8} \times 1$	$\frac{1}{8} \times 1\frac{1}{4}$	$\frac{1}{8} \times 1\frac{1}{2}$	$\frac{1}{8} \times 2$	$\frac{3}{16} \times 1\frac{1}{4}$	$\frac{3}{16} \times 1\frac{1}{2}$
No. Wire Gauge.....	13	13	11	11	11	11	7	7
Quantity in a Box....	1000	1000	1000	500	500	500	500	500
Wgt. 1000 about, lbs.	2 $\frac{1}{4}$	2 $\frac{1}{4}$	5	6	7	9	12	14
Per 1000.....	\$4.15	4.80	6.70	7.55	8.40	10.10	14.50	16.20
Size.....	$\frac{3}{16} \times 2$	$\frac{3}{16} \times 2\frac{1}{2}$	$\frac{3}{16} \times 3$	$\frac{1}{4} \times 1\frac{1}{4}$	$\frac{1}{4} \times 1\frac{1}{2}$	$\frac{1}{4} \times 1\frac{3}{4}$	$\frac{1}{4} \times 2$	$\frac{1}{4} \times 2\frac{1}{2}$
No. Wire Gauge.....	7	7	7	4	4	4	4	4
Quantity in a Box....	250	250	250	250	250	250	250	250
Wgt. 1000 about, lbs.	16	22	24	24	25	26	28	32
Per 1000.....	\$19.60	23.00	26.40	23.50	27.00	30.50	34.00	41.00
Size.....					$\frac{1}{4} \times 3$	$\frac{5}{16} \times 2$	$\frac{5}{16} \times 2\frac{1}{2}$	$\frac{5}{16} \times 3$
No. Wire Gauge.....					4	1	1	1
Quantity in a Box....					250	250	125	125
Weight 1000 about, lbs.					34	46	48	50
Per 1000.....					\$48.00	52.50	62.50	72.50

IN BULK.

Size.....	$\frac{3}{8} \times 2$	$\frac{3}{8} \times 2 \frac{1}{4}$	$\frac{3}{8} \times 2 \frac{1}{2}$	$\frac{3}{8} \times 3$	$\frac{3}{8} \times 3 \frac{1}{2}$	$\frac{3}{8} \times 4$	$\frac{1}{2} \times 2 \frac{1}{2}$	$\frac{1}{2} \times 3$	$\frac{1}{2} \times 3 \frac{1}{2}$	$\frac{1}{2} \times 4$	$\frac{5}{8} \times 3$	$\frac{5}{8} \times 3 \frac{1}{2}$
Weight per 1000 about, lbs....	70	80	86	100	110	120	125	190	210	230	320	390
Per 1000.....	\$86.40	93.60	100.80	115.20	129.60	144.00	178.50	208.50	238.50	268.50	384.00	424.00

No. 100A—ASSORTMENT OF 100 SPRING COTTERS; Consisting of 20 Each $\frac{3}{32} \times \frac{3}{4}$, $\frac{1}{8} \times 1$, $\frac{3}{16} \times 1 \frac{1}{4}$ inch; 10 Each $\frac{3}{16} \times 1 \frac{1}{2}$, $\frac{3}{16} \times 2$, $\frac{1}{4} \times 1 \frac{1}{4}$, $\frac{1}{4} \times 1 \frac{1}{2}$ inch; Weight per box about 1 1/2 lbs. \$1.00

FLAT SPRING KEYS.

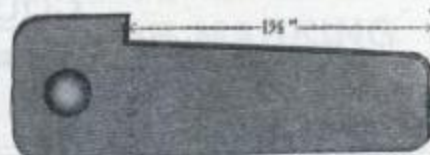


The Length is from Point to Neck under Eye.
Stamped from Spring Steel $\frac{1}{16}$ inch Thick; Natural Finish.

Size	$\frac{1}{2} \times 2$	$\frac{1}{2} \times 2 \frac{1}{2}$	$\frac{1}{2} \times 3$	$\frac{5}{8} \times 2 \frac{1}{2}$	$\frac{5}{8} \times 3$
Weight per 1000 about, lbs.	40	50	60	70	80
Per 1000	\$70.00	82.00	94.00	97.50	110.50

In Bulk.

*FLAT RIVETED KEYS.



Furnished in any size or style wanted.
Prices quoted on application according to specifications.

WHISK BROOMS.

With Handles.



No. 02.

No. 01.

Per Dozen

- No. 02—FULL BROOM CORN Stock; Length to Handle 7 inches; Stock Fastened to Handle by Bright Wound Wire; Black Enameled Wood Handle 3½ inches Long; Two Stitches; Width at Bottom 6¾ inches; Weight per dozen about 3½ lbs. \$2.00
- No. 01—MIXED BROOM CORN Stock; Length to Handle 8¼ inches; Bright Wire Wound Handle 2¾ inches Long; Velvet Tip; One Stitch; Width at Bottom 6 inches; Weight per dozen about 3½ lbs. 1.50
- One Dozen in a Cardboard Box.

CASTING BRUSHES.



Per Dozen

- No. 2W/0—STEEL WIRE; 4 Rows Wide, 10 Rows Long, Securely Fastened to Block with Steel Wire Staples; Natural Finish Hardwood Block, Size 2½x8 inches; Length of Wire Exposed 4 inches; Weight per dozen about 15 lbs. \$7.50
- Packed Loose.

FLOOR BRUSHES.

With Handles.



ALL BLACK SELECTED STIFF HORSE HAIR, 2¾ inch Stock, Wire Drawn to Lower Joint of Block; Can be used in Oil; Two-piece Hardwood Block, Cherry Enamined Finish, Securely Screwed together, with Two Screw Holes for Handle; Complete with 4½ Foot Hardwood Handle.

Nos.	312F	314F	316F
Size of Face, inches	4x14	4x16	4x18
Weight per dozen about, lbs.	30	34	39
Per dozen	\$20.00	26.00	32.00

One-quarter Dozen in a Cardboard Box.



MIXED GRAY AND BLACK TAMPICO 3 inch Stock, Wired to Lower Joint of Block; Two Piece Hardwood Block, Securely Nailed Together, Sand Papered, Natural Finish and Varnished, with Two Holes for Handles; 4½ foot Hardwood Handle, Natural Finish.

Nos.	412	414
Size of Face, inches	4x15	4x17
Weight per dozen about, lbs.	8	10
Per dozen	\$9.00	12.00

One-half Dozen in a Cardboard Box.

STENCIL DAUBERS.



Per Dozen

- No. 60—MIXED GRAY AND BLACK 1½ INCH BRISTLES, Glued in Black Enameled Wood Handle; Length over all 5½ inches; Weight per dozen about 1½ lbs. \$2.00

COUNTER BRUSHES.



BLACK BRISTLE CENTER, WITH WHITE BRISTLE BORDER; 2¾ inch Stock, Glue Set; Solid Hardwood Block and Handle, Maroon Stained and Varnished.

Nos.	1	2	3
Size of Face, inches	4x9½	4x11	4x11½
Length over all, inches	15¼	16¾	17¼
Weight per dozen about, lbs.	5	7	7
Per dozen	\$4.50	5.00	6.00



Per Dozen

- No. 82—BLACK TAMPICO CENTER, WITH GRAY BRISTLE BORDER; 2¾ inch Stock, Glue Set; Solid Hardwood Block and Handle, Natural Finish and Varnished; Size of Face 3½x9 inches; Length over all 15½ inches; Weight per dozen about 6 lbs. \$3.00

One-half Dozen in a Cardboard Box.

COUNTER BRUSHES.**COUNTER.**

BLACK TAMPICO CENTER WITH BLACK BRISTLE BORDER, Wired in Block; Solid Oak Wood Block and Handle, with Spliced Top, Nailed to Block; Natural Finish and Varnished.

Per Dozen

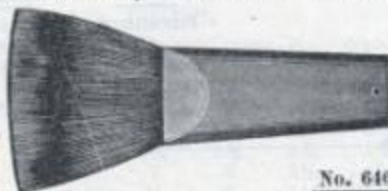
No. 200—Size of Face 3½x9 inches; Length of Bristles 2 inches; Length over all 15 inches; Weight per dozen about 8 lbs. \$6.00

One-half Dozen in a Cardboard Box.



Extra Heavy Quality 2½ inch Bristles; MIXED GRAY CENTER AND ENDS; WHITE CENTER BORDER; Glue Set; Solid Hardwood Block and Handle; Maroon Stained and Varnished.

Nos.	100	300	500
Size of Face, inches.....	4½x10	5x11	5½x12
Length over all, inches.....	16½	17½	18½
Weight per dozen about, lbs.....	6	7	8
Per dozen	\$6.00	8.00	10.00

LACQUERING OR VARNISH BRUSHES.

CAMEL HAIR, Glue Set; Metal Ferrule; Red or Black Enamelled Handle; Especially Adapted for Applying Third Coat or Transparent Varnish.

No. 646—Round.

Size, Nos.	1	2	3	4	5	6	1 to 6 Ass't'd.
Diameter at Ferrule, inches.....	½	¾	1	1¼	1½	1¾	½ to 5/16
Length Bristles, inches.....	5	7	7½	8	8½	8¾	¾ to 1¼
Length over all, inches.....	7	7½	7¾	8	8½	8¾	7 to 8¾
Weight per dozen about, lbs.....	½	¾	1	1¼	1½	1¾	¾ to 1¼
Per dozen	\$2.00	2.25	2.50	3.00	3.25	3.50	3.00

No. 647—Flat.

Width at Ferrule, inches.....	3/8	1/2	5/8	3/4	7/8	1	3/8 to 1
Length Bristles, inches.....	5	7	7½	8	8½	8¾	¾ to 1¼
Length over all, inches.....	6½	7½	8	8¼	9	9½	6½ to 9½
Weight per dozen about, lbs.....	½	¾	1	1¼	1½	1¾	¾ to 1¼
Per dozen	\$1.00	2.25	2.75	3.25	3.75	4.25	3.25

One Dozen in a Cardboard Box.

GLUE BRUSHES.**No. 42—Round Rubberset.**

Best Quality All White Bristle; Vulcanized, Hard Rubber Bound; Natural Finish Hardwood Handle.

Sizes	1	2	3	4	5	6	7
Diameter, inches.....	½	¾	1	1¼	1½	1¾	1½
Weight per dozen about, lbs.....	1	1¼	1¾	2	2¼	2½	3
Per dozen	\$1.64	2.09	2.42	3.10	4.00	5.20	6.60

GLUE BRUSHES.**No. 181—Adams Extra.**

Selected Quality All Grey Bristle; Polished Stamped Steel Ferrule; Natural Finish Hardwood Handle.

Sizes	22	24	27
Diameter, inches.....	1½	1¾	1¾
Weight per dozen about, lbs.....	6	7	8
Per dozen	\$6.10	7.76	9.48

One Dozen in a Cardboard Box.

ARTISTS OR MARKING BRUSHES.**No. 653—Double Ended.**

Selected Camel Hair; Polished Metal Ferrules; Natural Finish Hardwood Handle.

Sizes	2	4	6	8
Weight per dozen about, lbs.....	¼	½	¾	1
Per dozen	\$5.50	6.00	7.00	8.50

TRADE MARK:
"PENNANT"
REGISTERED.

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FEATHER DUSTERS

All our Dusters are kept in CLOSED CLOSETS, LINED WITH TAR PAPER, and are Guaranteed to leave us in Good Condition. Makes our Dusters worth double what others ask for the Same Dusters not kept Free from Moths and other Insects, etc.

TURKEY, SPLIT.

Feathers Wired to Block, STANDARD 100 COUNT; Detachable Black Enameled Wood Handle.

Nos.	10T	12T	14T	15T	16T	18T
Length of Duster, inches	10	12	14	15	16	18
Length of Handle, inches	10	11	13	15	15½	16
Weight per dozen about, lbs.	6	7	7	8	9	9
Per dozen	\$4.50	6.00	8.00	8.50	9.50	11.00

Full and Soft Feathers, Wired to Block, STANDARD 100 COUNT; Detachable Black Enameled Wood Handle.

Nos.	13F	14C	15C
	Furniture.	Carriage.	Car.
Length of Duster, inches	13	14	15
Length of Handle, inches	13½	14	15
Weight per dozen about, lbs.	7	8	9
Per dozen	\$9.00	10.00	11.00

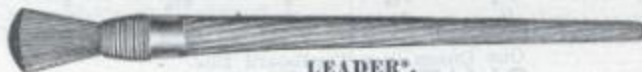
OSTRICH, BELL.

Gray Feathers, Full Center, Glue Set; Detachable Black Enameled Wood Handle.

Nos.	6/O	8/O	10/O	12/O	14/O	16/O	18/O	20/O	22/O
Length of Duster, inches	6	8	10	12	14	16	18	20	22
Length Handle, inches	7½	9½	11½	12½	15	17	19	21	22½
Weight per dozen about, lbs.	4	4	5	6	7	8	9	10	10
Per dozen	\$3.25	5.75	10.00	16.00	25.00	40.00	46.00	51.00	55.00

Packed Loose; Wrapped in Paper.

SASH BRUSHES.



LEADER*.

ALL WHITE BRISTLES, Glue Set; Red Enameled Wire Ferrule; Plain White Wood Handle.

Nos.	2W	4W	6W
Diameter at Ferrule, inches	½	¾	¾
Length Bristles, inches	1½	1¾	1¾
Length over all, inches	8½	9	10½
Weight per dozen about, lbs.	¾	¾	1
Per dozen	\$0.75	1.00	1.25

ROYAL*.

FRENCH WHITE BRISTLES, Glue Set; Black Enameled Wire Ferrule; Plain White Wood Handle.

Nos.	13W	14W	15W	16W	18W
Diameter at Ferrule, inches	9/16	11/16	12/16	12/16	¾
Length Bristles, inches	1½	1¾	2¼	2¼	2¼
Length over all, inches	8½	8½	9½	9½	10
Weight per dozen about, lbs.	½	¾	1	1¼	1½
Per dozen	\$1.50	1.75	2.00	2.40	3.00



PENNANT*.

CHINESE FINE BLACK BRISTLES, Glue Set, Chisel Point; Metal Ferrule; Cedar Handle, Varnished and Polished.

Nos.	21B	22B	23B	24B	25B	26B	28B	30B
Diameter at Ferrule, inches	½	¾	¾	¾	15/16	1	1¼	1¼
Length Bristles, inches	1½	10/16	11/16	11/16	11/16	2	2 3/16	2¼
Length over all, inches	8¾	8¾	8 13/16	9¾	9 13/16	9 15/16	10½	10¾
Weight per dozen about, lbs.	½	¾	¾	1	1¼	1¼	2	2¼
Per dozen	\$2.00	2.25	2.50	3.00	3.50	4.00	5.00	6.00

One Dozen in a Cardboard Box.



TRADE MARK:
"PENNANT"
REGISTERED.

-1055-

FLAT VARNISH BRUSHES.

**LEADER*.**

THIN FLAT WHITE BRISTLES, Glue Set; Metal Ferrule; Plain White Wood Handle.

Nos.	60W	61W	62W	63W
Width, inches	1	1½	2	2½
Length Bristles, inches	1½	1½	1½	1½
Length over all, inches	7	7¾	8¼	8¾
Weight per dozen about, lbs.	½	¾	1	1¼
Per dozen	\$0.60	.80	1.15	1.50

**BLACK CHIEF*.**

CHINESE BLACK BRISTLES, Glue Set, Chisel Point; Metal Ferrule; Yellow Stained Wood Handle.

Nos.	70B	71B	72B	73B
Width, inches	1	1½	2	2½
Length Bristles, inches	1½	1½	1½	1½
Length over all, inches	7	8	8½	9
Weight per dozen about, lbs.	½	¾	1	1¼
Per dozen	\$0.80	1.15	1.50	2.00

**METEOR*.**

WHITE BRISTLES, Glue Set, Chisel Point; Metal Ferrule; Round Wood Handle, Black Enamelled.

Nos.	80W	81W	82W	83W
Width, inches	1	1½	2	2½
Length Bristles, inches	1½	1½	1½	1½
Length over all, inches	6¼	6¾	7¾	8
Weight per dozen about, lbs.	½	¾	1¼	2
Per dozen	\$1.15	1.50	2.00	2.75

**ELECTRIC*.**

CHINESE BLACK BRISTLES, Extra Thick, Glue Set, Chisel Point; Metal Ferrule; Varnished Wood Handle.

Nos.	110B	111B	112B	113B
Width, inches	1	1½	2	2½
Length Bristles, inches	1½	1½	1½	1½
Length over all, inches	7¾	8¼	8¾	9¼
Weight per dozen about, lbs.	¾	1¼	1¾	2¼
Per dozen	\$1.50	2.50	3.25	4.00

**PENNANT*.**

CHINESE SELECTED BLACK BRISTLES, Extra Thick, Glue Set, Chisel Point; Metal Ferrule; Polished and Varnished Maroon Wood Handle.

Nos.	140B	141B	142B	143B
Width Bristles, inches	1	1½	2	2½
Length Bristles, inches	2	2½	2¾	3
Length over all, inches	8	8¾	9¾	10
Weight per dozen about, lbs.	1	1½	2¼	3¼
Per Dozen	\$3.50	5.00	6.50	10.00

Economy Nos. 90B, 91B, 92B and 93B, One Dozen in a Package; Balance Page One Dozen in a Cardboard Box.

**ECONOMY*.**

CHINESE BLACK BRISTLES, Extra Thick, Glue Set, Chisel Point; Metal Ferrule; Yellow Stained Wood Handle.

Nos.	90B	91B	92B	93B
Width, inches	1	1½	2	2½
Length Bristles, inches	1½	1½	1½	1½
Length over all, inches	7½	8	8½	9
Weight per dozen about, lbs.	1	1¼	2	3
Per dozen	\$1.25	1.75	2.50	3.50

**KREOLE*.**

CHINESE SELECTED BLACK BRISTLES, Extra Thick, Glue Set, Chisel Point; Metal Ferrule; Varnished Maroon Wood Handle.

Nos.	120B	121B	122B	123B
Width Bristles, in...	1	1½	2	2½
Length Bristles, in...	1½	1½	1½	1½
Length over all, in...	7¾	8¼	8¾	9¼
Wgt. doz. about, lbs.	¾	1¼	1¾	2¼
Per dozen	\$2.00	2.75	4.00	5.00

**DELMAR*.**

EXTRA QUALITY FRENCH WHITE BRISTLES, Extra Thick, Glue Set, Chisel Point; Metal Ferrule; Polished Cedar Handle.

Nos.	100W	101W	102W	103W
Width, inches	1	1½	2	2½
Length Bristles, inches	1½	1½	1½	1½
Length over all, inches	7	8¾	9¾	9¾
Weight per dozen about, lbs.	¾	1¼	2	2½
Per dozen	\$2.75	4.00	6.00	8.00

**KRUGER*.**

CHINESE SELECTED BLACK BRISTLES, Extra Thick, Glue Set, Chisel Point; Metal Ferrule; Polished and Varnished Maroon Wood Handle.

Nos.	130B	131B	132B	133B
Width Bristles, in...	1	1½	2	2½
Length Bristles, in...	1½	1½	1½	1½
Length over all, in...	8¼	8¾	9	9½
Wgt. doz. about, lbs.	1	1¼	2¼	3
Per dozen	\$2.75	3.50	5.00	7.00

-1056-

VARNISH OR PAINT BRUSHES.



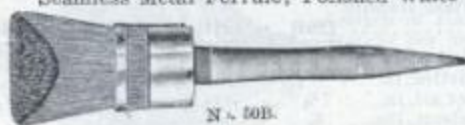
EMPRESS*.

Oval Shape; CHINESE SELECTED BLACK BRISTLES, Glue Set, Chisel End, Patent Open Center; Seamless Metal Ferrule; Polished White Wood Handle.

Nos.	40B	41B	42B	43B	44B	45B	46B	47B	48B
Diameter at Ferrule, inches	1 1/4	1 5/16	1 7/16	1 1/2	1 13/16	1 3/4	1 7/8	1 7/8	2
Length Bristles, inches	2 5/16	2 1/2	2 1/2	2 3/4	2 3/4	2 3/4	3	3 3/16	3 1/2
Length over all, inches	8 11/16	9	9	9 1/4	9 3/4	10	10 3/16	10 1/2	10 5/8
Weight per dozen about, lbs.	5 1/4	1 3/4	1 1/4	1 1/2	1 1/2	2 1/4	2 1/2	2 3/4	3
Per dozen	\$6.00	7.00	8.00	9.50	10.75	12.00	13.00	15.00	19.00

EMPEROR.

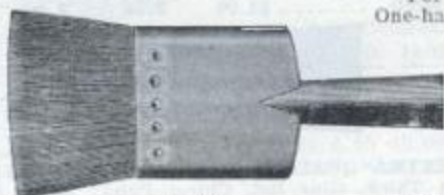
Oval Shape; CHINESE FINEST QUALITY BLACK BRISTLES, Glue Set, Chisel End, Patent Solid Center; Seamless Metal Ferrule; Polished White Wood Handle; Nickel Plated Metal Bridle.



No. 50B.

Nos.	50B	51B	52B
Diameter at Ferrule, inches	2 1/4	2 3/16	2 5/16
Length Bristles, inches	4 1/16	4 3/4	4 1/2
Length over all, inches	11 1/2	11 3/4	12
Weight per dozen about, lbs.	3 3/4	3 3/4	4
Per dozen	\$22.00	28.00	32.00

One-half Dozen in a Cardboard Box.



No. 745.

FITCH.

SOFT HAIR FLOWING BRISTLES, Glue Set, Nailed and Clinched; Metal Ferrule; Rosewood Stained Handle.

No. 745—Square End.

	1	1 1/2	2	2 1/2
Width at Ferrule, inches	1 1/4	1 3/4	1 3/4	1 3/4
Length Bristles, inches	6 1/2	6 3/4	7	7 1/4
Length over all, inches	1 1/2	3/4	1	1 1/4
Weight per dozen about, lbs.	3 1/2	5.00	7.00	9.00
Per dozen	\$3.50	5.00	7.00	9.00

No. 747—Chisel End.

	1	1 1/2	2	2 1/2	3
Width at Ferrule, inches	1 1/4	1 3/4	1 3/4	1 3/4	1 3/4
Length Bristles, inches	6 1/2	6 3/4	7 1/4	7 3/4	7 3/4
Length over all, inches	1 1/2	3/4	1	1 1/4	1 1/4
Weight per dozen about, lbs.	3 1/2	6.50	8.50	9.50	12.50
Per dozen	\$4.50	6.50	8.50	9.50	12.50

One Dozen in a Cardboard Box.

MARKING BRUSHES.



No. 2—NATIONAL GRAY BRISTLES, Glue Set; Metal Ferrule; Flat Cedar Handle; Width at Ferrule 1 1/4 inches; Length of Bristles Tapered from 3/4 to 1 1/4 inches; Length over all 9 1/4 inches; Weight per dozen about 1 1/2 lbs.; Especially Adapted for Marking Bales. Per Dozen \$4.00
One Dozen in a Cardboard Box.



No. 6—ALL WHITE BRISTLES, Glue Set; Assorted Sizes, Nos. 1 to 6; Metal Ferrules, Assorted, from 1/16 to 3/16 inch; Length of Bristles, Assorted, from 1/2 to 3/4 inch; Length over all 1 1/4 inches; Weight per dozen about 1 1/2 lbs. Per Dozen \$0.75
Twelve Dozen Assorted Sizes in a Cardboard Box.



No. 544—SIZE No. 6—FINE BEAU BLANC, Glue Set; Width of Bristles at Ferrule 3/4 inch; Length Bristles 1 1/4 inches; Weight per dozen about 1 1/2 lbs. Per Dozen \$1.25
Twelve Dozen in a Cardboard Box.

-2072-



SADDLERS' RULES.



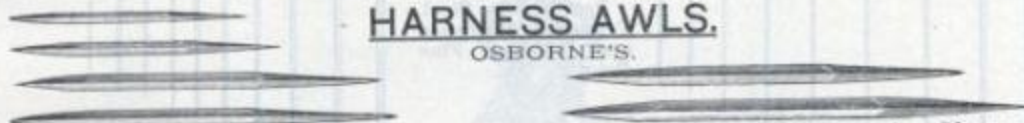
OSBORNE'S.

Per Dozen

- No. 160/2—Saddlers'; 2 FOOT; Varnished Boxwood; 1½ inches Wide; ¼ inch Thick; Figures and Lines Stamped in Black; Graduated in ¼ inch; 2 Sets of Figures on Each Side of Rule; Brass Tipped Ends; Weight per dozen about 3 lbs. \$7.50
- No. 160/3—Saddlers'; 3 FOOT; Otherwise same as No. 160/2; Weight per dozen about 4½ lbs. 10.50
- One-half Dozen in a Cardboard Box.

HARNESS AWLS.

OSBORNE'S.



Best Grade Steel, Tempered, Hardened and Polished; Triangular Shape. Assorted

Nos.	43	44	45	46	47	48	49	50	51	52	43 to 48
Length, inches	1¾	2	2¼	2½	2¾	3	3¼	3½	3¾	4	1¾ to 2¾
Per dozen	\$0.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40

Twelve Dozen in a Package; Weight per Package about ½ lb.

NEEDLES.

SPEYING.

Made of Best Grade Steel, Tempered, Hardened and Polished.

Length, inches	3	3½
Weight per gross, oz.	8	12
Per gross	\$2.25	2.75

One-quarter Gross in a Package; One Gross in a Cardboard Box.

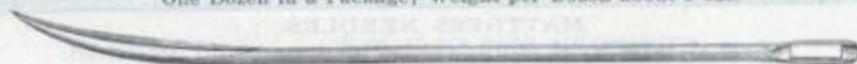


COLLAR.

Best Grade Steel, Tempered, Hardened and Polished.

No. 92—Half Moon.							No. 92C—Half Curved.								
Size, inches.	3	3½	4	4½	5	5½	6	Size, inches.	3	3½	4	4½	5	5½	6
Per dozen..	\$3.00	3.00	3.00	3.00	3.00	3.00	3.00	Per dozen..	\$3.00	3.00	3.00	3.00	3.00	3.00	3.00

One Dozen in a Package; Weight per Dozen about 3 ozs.



SACKING OR PACKING.

No. 99—Best Grade German Steel, Tempered, Hardened and Polished.

Size, inches	3	3½	4	4½	5	6	8	Assorted
Weight per gross about, lbs.	1	1½	1½	2	2½	3	4	1½
Per gross	\$2.25	2.50	2.70	3.00	3.50	4.50	8.00	3.25

One-quarter Gross in a Paper.

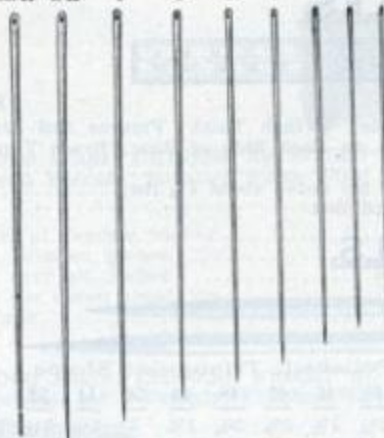
No. 5061—James' Best Grade English Steel, Bent Points, Tempered, Hardened and Polished.

Size, inches	5	5½	6	6½	7
Weight per gross about, lbs.	3	3½	4	4½	5
Per gross	\$3.00	3.25	3.75	4.50	6.00

One-quarter Gross in a Cardboard Box.



Sizes: 00/E 0/E 1 2 3 4 5 6 7



NEEDLES.

Sizes: 000 00 0 1 2 3 4 5 6 7


 Best Grade Steel,
Tempered, Hardened
and Polished; Fine
Point.

Egg Eye Harness Needles.

Nos.....	00E	0E	1E	2E	3E
Per dozen papers.....	\$2.00	2.00	2.00	2.00	2.00
Nos.....	4E	5E	6E	7E	
Per dozen papers.....	\$2.00	2.00	2.00	2.00	

Round Eye Glovers' Needles.

Nos.....	000	00	0	1	2
Per dozen papers.....	\$3.00	3.00	3.00	3.00	3.00
Nos.....	3	4	5	6	7
Per dozen papers.....	\$3.00	3.00	3.00	3.00	3.00

 Weight per Dozen Papers about 2 ounces.
Twenty-five Needles of a Size in a Paper.


Cotton Baling and Seed Sacking.

Best Grade Steel, Tempered, Hardened and Polished.

No. 835—5 inches Long; Large Eye; Weight per gross 2½ lbs.	Per Gross
No. 830—8 inches Long; Large Eye; Weight per gross 8 lbs.	\$ 7.50
	11.50

One-quarter Gross in a Paper.



Schrimpton's Sacking.

No. 934—4 inches Long; Spring Eye; Polished English Spring Steel; With Patent Thread Cutter in Eye;	Per Gross
Weight per gross about 1 lb.	\$30.00
No. 935—5 inches Long; Spring Eye; Polished English Spring Steel; With Patent Thread Cutter in Eye;	
Weight per gross about 1½ lbs.	36.00

One-twelfth Gross in a Paper; One Gross in a Package.



MATTRESS NEEDLES.

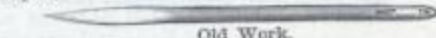
Best Grade Steel, Tempered, Hardened and Polished.

Mattress: 12 INCHES LONG; DOUBLE POINTED.	Per Dozen
	\$1.35

One Dozen in a Paper.



Flat Seam.



Old Work.



Tabline.



Head Rope.

Best Grade Steel, Tempered, Hardened and Polished.

Flat Seam: 3 inches Long.....	Per 100		Per 100
Tabline: 3 inches Long.....	\$2.50		
	2.50	Old Work: 3 inches Long.....	\$2.50
		Head Rope: 3¼ inches Long.....	3.00

Fifty in a Paper; Weight per 100 about 8 ozs.

AUTOMOBILE JACKS.

RELIABLE.



Malleable Iron Body, Gear and Thumb Wheel, Aluminum Finish; Machine Cut Steel Worm, Swivel Top; Malleable Iron Lever, with Reversible Pull Spring Ratchet Latch.

By means of the Thumb Wheel Gear on side, the Worm can be quickly run up to meet the Load, and by then making three or four strokes of the Lever, the Load will be raised.

In lowering the Load, the Spring Ratchet Latch on the Lever is reversed by Thumb Pressure, the Load is then lowered by the same stroke as it was raised.

These Jacks are Self-locking at any point, so that it is impossible for the Load to drop by accident.

No. 1 is especially adapted for Automobiles, and owing to its size, is a Light Handy Jack for its purpose.

No. 0 is same as No. 1, except Taller and is especially adapted for High Automobiles, Buggies, Cabs, Carriages and Agricultural purposes.

Nos.	1	0
Height closed, inches.....	10½	15
Height extended, inches.....	18	24
Size of Base, inches.....	4½	4½
Diameter of Worm, inches.....	¾	¾
Size of Head, inches.....	1½ x 1½	1½ x 1½
Capacity, tons.....	2	2
Weight each about, lbs.....	5½	6½
Per dozen.....	\$36.00	36.00

JACK SCREWS.

S. H. Co.'s.® BOSS LOCOMOTIVE.

Wrought Iron Screw; Cast Iron Stand, with Handle; Corrugated Head.



Nos. 1 to 6.

Nos.	1	2	3	4	6
Diameter of Screw, inches.....	1¼	1½	1¾	1¾	2
Length of Screw, inches.....	10	12	14	16	18
Diameter of Top, inches.....	3½	3½	3½	3½	4
Diameter of Base, inches.....	6¼	6¼	7½	7½	8¾
Length over all, closed, inches.....	13½	15½	17½	20	22½
Length over all, extended, inches.....	24½	28	32	33½	43
Lifting Capacity, tons.....	10	12	16	16	20
Weight each about, lbs.....	14	20	28	28	45
Each.....	\$3.80	5.25	6.75	7.50	10.25

Packed Loose.

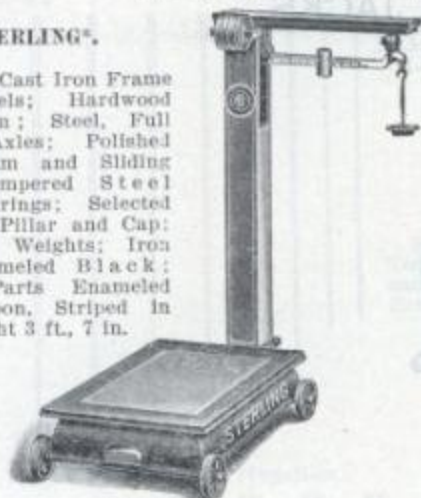
TRADE MARK:
"STERLING,"
REGISTERED.

PORTABLE PLATFORM SCALES.



STERLING®.

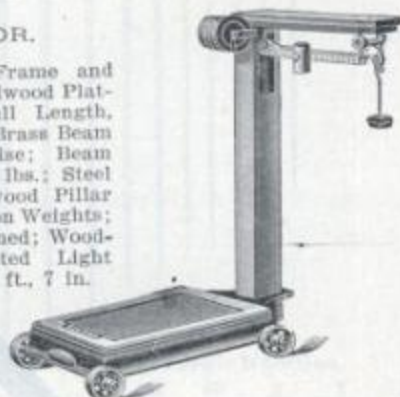
Heavy Cast Iron Frame and Wheels; Hardwood Platform; Steel, Full Length, Axles; Polished Brass Beam and Sliding Poise; Tempered Steel Knife Bearings; Selected Hardwood Pillar and Cap; Cast Iron Weights; Iron Parts Enameled Black; Wooden Parts Enameled Rich Maroon, Striped in Gold; Height 3 ft., 7 in.



Extra Weights should not be added to make scales weigh more than intended.

VICTOR.

Cast Iron Frame and Wheels; Hardwood Platform; Steel, Full Length, Axles; Polished Brass Beam and Sliding Poise; Beam Graduated in 1/2 lbs.; Steel Bearings; Hardwood Pillar and Cap; Cast Iron Weights; Iron Parts Japanned; Wooden Parts Painted Light Green; Height 3 ft., 7 in.



STERLING®.

Graduated in 1/2 pounds.

Nos.	600/S	800/S	1000/S
Capacity, lbs.	600	800	1000
Size of Platform, inches	16x22	16x25	17x26
Weight each about, lbs.	135	155	170
Each	\$25.00	30.00	35.00

Graduations in Kilos and Grammes.

Nos.	600/SK
Capacity, Kilos	300
Size of Platform, inches	16x22
Weight each about, lbs.	135
Each	\$25.00

VICTOR.

Nos.	7126V	7128V	7130V	7132V
Capacity, lbs.	600	800	1,000	1,200
Size of Platform, inches	16x22	16x25	17x26	18x27
Weight each about, lbs.	130	150	160	170
Each	\$18.00	20.00	23.50	24.00

One in a Case.

FAIRBANKS' STANDARD.

Heavy Cast Iron Frame and Wheels; Steel, Full Length Axles; Polished Brass Beam and Sliding Poise; Beam Graduated in 1/2 lbs.; Tempered Steel Knife Bearings; Hardwood Pillar, Platform and Cap; Cast Iron Weights; Iron Parts Enameled Black; Wooden Parts Enameled Blue, Striped in Gold; Height over all 4 feet.



Extra Weights should not be added to make scales weigh more than intended.



With Wheels.

Nos.	1128F	1126F	1124F	1122F
Capacity, lbs.	600	800	1,000	1,200
Size of Platform, inches	16x25	17x26	17x26	20x28
Weight each about, lbs.	175	184	186	228
Each	\$33.00	38.00	43.00	49.00
Nos.	1120F	1118F	1116F	
Capacity, lbs.	1,500	2,000	2,500	
Size of Platform, inches	21x28	25x33	26x34	
Weight each about, lbs.	250	315	375	
Each	\$56.00	75.00	85.00	

With Wheels and Drop Lever.

Nos.	1174F	1172F	1170F
Capacity, lbs.	1,000	1,200	1,500
Size of Platform, inches	17x26	20x28	21x28
Weight each about, lbs.	210	285	390
Each	\$51.00	59.00	70.00
Nos.	1168F	1166F	
Capacity, lbs.	2,000	2,500	
Size of Platform, inches	25x33	26x34	
Weight each about, lbs.	430	775	
Each	\$82.00	94.00	

One in a Case.

TRADE MARK:
"ROYAL"
REGISTERED.

-677-

COUNTER SCALES.



With Brass Scoop.
High Grade.
Beautifully Finished.



ROYAL COUNTER.

ROYAL.

HEAVY CAST IRON FRAME, PLATFORM AND PILLAR; Polished Brass Single Beam; EXTRA HEAVY POLISHED BRASS SCOOP; Tempered Steel Knife Bearings; Cast Iron Weights and Hanging Poise; Size of Platform, $10\frac{1}{2} \times 13\frac{1}{2}$ inches; Size of Scoop $19\frac{1}{4} \times 10\frac{1}{2}$ inches; Iron Parts Finely Finished in Aluminum and Striped with Gold.

Each

No. R—ROYAL; CAPACITY $\frac{1}{2}$ OUNCE TO 240 LBS.; Weight each about 42 lbs. \$15.00



S. H. Co.'s Scale. A most desirable Scale for general use. Each one carefully inspected.

UNION, S. H. Co.'s, COUNTER.
CAPACITY $\frac{1}{2}$ OUNCE TO 240 POUNDS.

Each

No. S—S. H. Co.'s; CAST IRON FRAME, PLATFORM AND PILLAR; Polished Brass Single Beam; HEAVY TIN SCOOP; Steel Bearings; Cast Iron Weights and Hanging Poise; Size of Platform, $10\frac{1}{2} \times 13\frac{1}{2}$ inches; Size of Scoop, $19\frac{1}{4} \times 10\frac{1}{2}$ inches; Iron Parts Painted Red, and Gold Striped; Weight each about 40 lbs. \$8.00

No. E—EXCELSIOR; Cast Iron Frame, Platform and Pillar; Polished Brass Single Beam; TIN SCOOP; Steel Bearings; Cast Iron Weights and Hanging Poise; Size of Platform, $10\frac{1}{2} \times 13\frac{1}{2}$ inches; Size of Scoop, $19\frac{1}{4} \times 10\frac{1}{2}$ inches; Iron Parts Japanned; Weight each about 40 lbs. 7.00

No. 6—AMERICAN; Iron Parts Painted Red and Gold Striped; DOUBLE BEAM; Otherwise same as No. E; Weight each about 43 lbs. 9.25



Single Beam, Platform and Fork.



Double Beam, Platform and Fork.

FAIRBANKS' STANDARD. UNION.

CAPACITY $\frac{1}{2}$ OUNCE TO 240 POUNDS.

Heavy Cast Iron Frame, Pillar, Platform, Levers, Poises, and Weights; Tempered Steel Knife Bearings; Polished Brass Beams with Hanging Poises; Made with Platform and Scoop Fork, or Two Platforms and Scoop with Foot; Size of Main Platform, $10\frac{1}{2} \times 13\frac{1}{2}$ inches; Size of Scoop, $19\frac{1}{4} \times 10\frac{1}{2}$ inches; Iron Parts Enameled Black and Striped with Gold.

SINGLE BEAM.

Each

No. 500F—TIN SCOOP, Platform and Fork.....\$14.00
No. 502F—BRASS SCOOP, Platform and Fork... 15.00
No. 508F—TIN SCOOP, TWO PLATFORMS..... 14.50
No. 510F—BRASS SCOOP, TWO PLATFORMS... 15.50

DOUBLE BEAM.

Each

No. 504F—TIN SCOOP, Platform and Fork.....\$15.00
No. 506F—BRASS SCOOP, Platform and Fork.... 16.00
No. 512F—TIN SCOOP, TWO PLATFORMS..... 15.50
No. 514F—BRASS SCOOP, TWO PLATFORMS... 16.50

Weight Each about 57 lbs.

One in a Case.

COUNTER SCALES.

FAIRBANKS' STANDARD.

Even Balance.
With Tin Scoop.

Nos.	685F	673F	661F
Capacity	1/2 oz to 4 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.
Size of Scoop, inches	16 1/2 x 8	18 1/2 x 8 1/2	19 1/2 x 10 1/2
Weight each about, lbs.	20	25	42
Each	\$5.00	6.00	7.00

With Brass Scoop.

Nos.	686F	674F	662F
Capacity	1/2 oz to 4 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.
Size of Scoop, inches	16 1/2 x 8	18 1/2 x 8 1/2	19 1/2 x 10 1/2
Weight each about, lbs.	20	25	42
Each	\$5.75	6.75	8.00

Even Balance, with Brass Side Beams and Hanging Poise.
With Tin Scoop.

Nos.	687F	675F	663F
Capacity	1/2 oz to 4 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.
Size of Scoop, inches	16 1/2 x 8	18 1/2 x 8 1/2	19 1/2 x 10 1/2
Weight each about, lbs.	20	25	42
Each	\$6.00	7.00	8.00

With Brass Scoop.

Nos.	688F	676F	664F
Capacity	1/2 oz to 4 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.
Size of Scoop, inches	16 1/2 x 8	18 1/2 x 8 1/2	19 1/2 x 10 1/2
Weight each about, lbs.	20	25	42
Each	\$6.75	7.75	9.00

GROCERS' 2-PLATE TRIP
AND SCOOP WITH
FOOT.Trip.
With Tin Scoop.

Nos.	752F	751F	750F	749F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	17	28	48	68
Each	\$6.50	8.00	10.00	12.75

With Brass Scoop.

Nos.	760F	759F	758F	757F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	17	28	48	68
Each	\$7.50	9.00	11.00	14.25

Trip, with Brass Side Beam and Hanging Poise.
With Tin Scoop.

Nos.	756F	755F	754F	753F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	17	28	48	68
Each	\$7.00	8.75	11.00	13.75

With Brass Scoop.

Nos.	764F	763F	762F	761F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	17	28	48	68
Each	\$8.00	9.75	12.00	15.25



GROCERS'.

Trip.
With Tin Scoop.

Nos.	704F	703F	702F	701F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	15	25	41	62
Each	\$5.50	7.00	9.00	11.75

With Brass Scoop.

Nos.	712F	711F	710F	709F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	15	25	41	62
Each	\$6.50	8.00	10.00	13.25

Trip, with Brass Side Beam and Hanging Poise.
With Tin Scoop.

Nos.	708F	707F	706F	705F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	15	25	41	62
Each	\$6.00	7.75	10.00	12.75

With Brass Scoop.

Nos.	716F	715F	714F	713F
Capacity	1/2 oz to 2 lbs.	1/2 oz to 6 lbs.	1/2 oz to 10 lbs.	1/2 oz to 16 lbs.
Size of Scoop, inches	12 1/2 x 6 1/4	16 1/2 x 8	19 1/2 x 10 1/2	24 x 10 1/2
Weight each about, lbs.	15	25	41	62
Each	\$7.00	8.75	11.00	14.25

One in a Case.

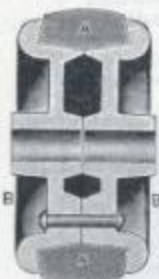
TRADE MARK:
"RUN EASY,"
REGISTERED.

-690-

TRUCKS.



Select
Oak
Handles
and
Frame.
Extra
Fine
Finish.



Method of Fastening Rubber
Tire on Wheel.

Extra
Heavy
Wheels
with
Rubber
Tires
that
will
stay on.



RUN EASY®.

Select Varnished Heavy Oak Handles; Four Mortised Oak Cross Braces; FULL LENGTH HEAVY JAPANNED IRON HANDLE STRAPS and Nose Iron in One Piece; Heavy Cast Iron Japanned Wheels, WITH PATENT IN-SET RUBBER TIRES; Malleable Axle Brackets; Handle Grips Painted Red.

RUN EASY®.

WAREHOUSE OR HOTEL, Iron Strapped Cross-Braces, with 9-inch Round Iron Welded Jointless Legs and Leg Braces; Top and Bottom Bolted Steel Cross Rods for Tightening.

Nos.	RF1	RF2	RF3
Length over all, inches.....	48	52	58
Width, inches.....	19	20	22
Diameter of Wheel, inches....	7½	8½	10½
Weight each about, lbs.....	55	70	95
Each	\$11.00	15.00	19.00

RUN EASY®.

BOX OR GROCERY, without Legs; Cross Braces Reinforced by Oak Center Strip, all Painted Red; Extra Bent Handle Grips, ¾-inch Steel Axle.

Nos.	RG
Length over all, inches.....	47
Width, inches.....	17
Diameter of Wheel, inches.....	6½
Weight each about, lbs.....	30
Each	\$10.00



No. WH1.



No. WF1.



No. H1.

STANDARD, Warehouse and Hotel.

Varnished Hardwood Handles; Four Mortised Wood Cross Braces; Japanned Iron Handle Straps and Nose Iron in One Piece; Cast Iron Japanned Wheels; Malleable Iron Axle Brackets; Flat Steel Legs and Leg Braces, Riveted; ¾-inch Steel Axle.

STANDARD, WAREHOUSE;
HALF IRONED; Handle
Straps extend up about 23
inches.

Nos.	WH1	WH2	WH3
Lgth over all, in.	48	51	56
Width, inches....	19	20	22
Diam. of Wheel, in.	7	8½	9½
Wgt. ea. about, lbs.	45	65	85
Each	\$7.00	9.00	13.00

STANDARD, WAREHOUSE;
FULL IRONED; Handle
Straps extend up to
Grips about 37 inches.

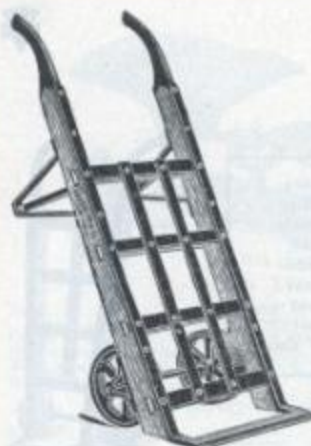
Nos.	WF1	WF2	WF3
Lgth over all, in.	48	51	56
Width, inches....	19	20	22
Diam. of Wheel, in.	7	8½	9½
Wgt. ea. about, lbs.	50	70	90
Each	\$8.00	10.50	15.00

STANDARD HOTEL; HALF
IRONED; Handle Straps
extend up about 26½ inches;
Rubber-Tired Wheels;
Handle Grips Painted Black.

Nos.	H1	H2
Length over all, inches.	49	51
Width, inches.....	19	20
Diam. of Wheels, inches	7½	8
Weight each about, lbs.	45	65
Each	\$10.00	14.00

Packed Loose.

TRUCKS.



Heavy Varnished Hardwood Handles; Four Mortised, Iron Strapped, Hardwood Cross Braces; Two Upright Iron Center Braces, and Full Length Heavy Japanned Iron Handle Straps and Nose Iron in One Piece; Extra Heavy Cast Iron Japanned Wheels; Malleable Iron Axle Brackets; Flat Steel Legs and Leg Braces, Riveted; 1 inch Steel Axle; Handle Grips Painted Black.

STANDARD, RAILROAD; HEAVY FULL IRONED; Handle Straps extend up to Grips, about 48 inches.

No.	R4
Length over all, inches.....	63
Width, inches.....	24
Diameter of Wheel, inches.....	10 1/2
Weight each about, lbs.....	115
Each	\$20.00

STANDARD, MEDIUM WEIGHT, FULL IRONED; Handle Straps extend up to Grips, about 48 inches.

No.	RL4
Length over all, inches.....	63
Width, inches.....	24
Diameter of Wheel, inches.....	10 1/2
Weight each about, lbs.....	95
Each	\$18.00

Packed Loose.

ROLLER TRUCKS OR DOLLIES.



Steel Frame, Flexible.

Heavy Braced and Bolted Steel Frame, Painted Blue; 1 1/16 inch Wrought Steel Axles, Sheathed with 1 inch Gas Pipe; Six Heavy Cast Wheels, 4 inch Diameter, 1 1/4 inch Face. Frame is Flexible, being Hinged on Center Axle so as to Fold Conveniently for Carrying and so that the Truck will quickly Adjust itself to Uneven Surfaces. Sharp Lower Corners of Each End of Frame Catch on the Floor when the Truck is Tilted by Throwing a Box upon it, and Preventing any Slipping of the Truck; Center Pair of Wheels is Lower set than the End Wheels, causing the Truck to Pivot on the Center Wheels and be Readily Turned in any Direction. Top of Frame has Projecting Points or Spurs at Each End to Prevent Slipping of a Box or Package.

Each

No. 8F—FLEXIBLE STEEL; Outside Dimensions of Frame 22 inches Long, 12 1/4 inches Wide; Dimensions of Steel in Main Frame 1 3/4 x 1/4 inch; Weight each about 25 lbs.....	\$12.00
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Packed Loose.



LITTLE GIANT, BOX.

Varnished Hardwood Center Handle 1 1/2 inches Square, with Rounded Hand-grip; Varnished Hardwood Axle Frame and Side-braces, Double Bolted and Strapped at Top and Bottom and with Steel Nose-pieces at Bottom; Steel Axle 3/4 inch Square, with 5/8 inch Round Wheel Bearings; Cast Iron Wheels, with 1 1/4 inch Tread; All Metal Parts Japanned Finish.

No.	L
Length over all, inches.....	56 1/2
Extreme width at bottom, inches.....	15
Diameter of Wheels, inches.....	5
Weight each about, lbs.....	13 1/2
Each	\$3.00

Packed Loose.



WOOD FRAME.

Extra Heavy Mortised and Bolted Hardwood Frame, Varnished; Japanned Malleable Axle Brackets; Heavy Wrought Steel Axle; Japanned Cast Iron Cylindrical Roller.

Nos.	1	2	3
Outside Dimensions of Frame, in....	16x19	19 1/2 x 26	18x24
Length of Roller, in.....	10	12	12
Diameter of Roller, in.....	6	6	3
Weight each about, lbs.....	70	80	45
Each	\$7.50	10.00	5.00

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GALVANIZED SHEET STEEL WARE.

All Dimensions on this page are Standard Measurements.
WELL BUCKET BAILS.



Made of Wrought Iron, Galvanized; Width $\frac{1}{2}$ inch; Length over all 7 inches; For Use on Galvanized Bored Well Buckets.

Nos.	3½	4	4½	5	6
Size, inches	3½	4	4½	5	6
Per dozen	\$1.00	1.00	1.00	1.00	1.00

One-half Dozen in a Bundle; Weight per Dozen about 5 lbs.

WELL BUCKET BOTTOMS.

Made of Solid Maple; Leathered Valve; Tinned Iron Brace and Valve Opener.

Size, inches	3½	4	4½	5	6
Weight per dozen about, lbs.	4	5	6	7½	9
Per dozen	\$3.00	3.00	3.00	3.00	3.00

ASH CANS.**MONITOR; WITHOUT COVERS.**

Double Seamed; 27 Gauge; $1\frac{1}{2}$ inch Galvanized Steel Band, Riveted at Top Rim; Body Reinforced with 3 inch Corrugated Galvanized Iron Band, Riveted to Outside of Can; Galvanized Wire Handles, Riveted.

Nos.	2½	3
Diameter, inches	14	15
Depth, inches	18	28
Capacity, gallons	13	18
Weight per dozen about, lbs.	108	228
Per dozen	\$59.40	69.60

Packed Loose.

ASH CAN COVERS.

Seamless; One Piece; 25 Gauge; 1 inch Flanged Rim; Riveted Handle.

Nos.	2C	3C	5C
Diameter, inches	14	15	18
Fits Ash Can Nos.	2½	3	9
Per dozen	\$13.75	18.50	27.50

Packed Loose; Weight per Dozen about 25 lbs.

GARBAGE CANS.

Double Seamed; 27 Gauge; 10 Gauge Galvanized Wire Ball; Riveted Iron Ears; Seamless Galvanized Sheet Iron Cover, Rimmed Edge, with Riveted Handle, Fits over Outside of Can.

Nos.	60	83
Size, inches	12x10½	14x14
Capacity, gallons	4½	10
Weight per dozen about, lbs.	60	84
Per dozen	\$34.80	48.60

GARBAGE CANS.**KING; WITH COVERS.**

Made of 21 Gauge Cold Rolled Annealed Steel; Heavily Galvanized; Double Seamed Corrugated Body, with Straight Uniform Corrugations; Seamless Stamped Steel Bottom, Securely Crimped and Riveted to Shoulder of Heavy Wrought Steel Bottom Band; 1 inch Wrought Steel Galvanized Top Hoop with Cleat Joint, Securely Riveted; Seamless Oval Shaped Tight Fitting Odorless Cover, with Riveted Galvanized Steel Handle; Malleable Iron Carrying Handles, Securely Riveted.

Bottom and Top Edges of Body are Smoothly Rolled which makes a Perfectly Smooth Joint, leaving no crevices into which Ashes or Garbage can gather; This adds greatly to the life of the Can, as it Prevents Acids from eating the Steel.

Nos.	1K	2K	3K
Size, inches	15x26½	18x26½	21x26½
Capacity, gallons	17	25	34
Weight per dozen about, lbs.	240	324	384
Per dozen	\$50.00	60.00	72.00

Packed Loose.



OIL TANKS.

COAL OIL AND GASOLINE.



No. 60GT—FOR GASOLINE; Capacity 60 Gallons;
Made of 27 Gauge Galvanized Iron,
Double Seamed and Soldered; Beaded Body, 1
inch Galvanized Steel Rim at Bottom; 6 inch
Zinc Screw Filler Cap; $\frac{3}{4}$ inch Brass Faucet,
Soldered on; Galvanized Iron Handles, Sol-
dered; Diameter 25 inches; Height 30 inches;
Weight each, crated, about 45 lbs.....

Each

No. 60—FOR GASOLINE; Capacity 60 Gallons;
Made of 27 Gauge Galvanized Iron, Double
Seamed and Soldered; Beaded Body, Painted
Green, Gold and Silver Decorated; Wood Bot-
tom under Galvanized Iron Bottom; $\frac{3}{4}$ inch
Brass Faucet, Soldered on; Solid Brass Filler
Cap, Diameter 2 inches; Tank Diameter 23
inches; Height 38 inches; Weight each, crated,
about 45 lbs.....

Each

\$5.00

\$9.00



Star—FOR COAL OIL; Capacity 60 Gallons; Made of 27 Gauge Galvanized Iron, Double Seamed and Sol-
dered; Beaded Body, Painted Green, Gold and Silver Decorated; Hood Painted Red, Gold Decorated,
with Black Enamelled Wood Knob; Wood Bottom under Galvanized Iron Bottom; 1 inch Steel Rim around
Bottom Edge; Diameter 25 inches; Height 41 inches; Removable Tin Pump, Diameter $3\frac{1}{4}$ inches; Length
38 inches; Coppered Steel Wire Plunger Rod; Black Enamelled Wood Handle; Diameter of Spout 1 inch;
Double Seamed and Soldered; Weight each, crated, about 60 lbs.....

Each

\$9.00

One in a Crate; Wrapped in Paper.

OILY WASTE CANS.



Galvanized Sheet Steel Body, Double Seamed; Flat Steel Legs, Riveted; Galvanized Sheet Steel Handles;
Rimmed Hinge Cover with Self-closing Spring, fitted with Flat Handle.

No Solder used on these Cans, they are Galvanized after being put together, which make them perfectly
Rigid and Fire Proof.

Nos.	1	2	3	4	5	6
Gauge of Iron	28	28	28	24	24	24
Weight each about, lbs.	5	6	7 $\frac{1}{2}$	9	17 $\frac{1}{2}$	20
Each	\$3.00	4.00	5.00	6.00	7.50	10.00

Packed Loose.

MT



GLUE POTS.



Cast Iron Outside Jacket, Black Japanned; Inside Jacket Tinned Inside; Flanged Top Rets on Rim; Iron Wire Balls, Copper Finish.

Nos.	2/0	1/0	1	
Standard Capacity, pts.....	¾	1	1½	
Weight per dozen about, lbs.....	35	45	51	
Per dozen	\$5.50	6.00	6.75	
Nos.	2	3	4	5
Standard Capacity, pts.....	2	3	4	5
Weight per dozen about, lbs.....	67	75	98	116
Per dozen	\$8.40	10.26	12.42	14.58

Packed Loose.



Extra Heavy Copper Throughout; Flanged Kerosene Oil Fount, 7 1/2 inches Diameter; Uprights Supporting Glue Pot, 6 1/4 inches Long, 3/4 inch Wide; Flame is Enclosed and can be instantly regulated so that Glue can be kept at desired Temperature; Brass Eyelet Pots; Extension Bottom, prevents tipping.

No.	8/1
Capacity of Glue Pot, Quarts	1
Height over all, inches (Ball extended)	20
Weight each about, lbs.	20
Each	\$10.00

One in a Box.

METAL POLISH.

POLISHINE.
Silver Polish.



Per Dozen Boxes
No. 12P—For Cleaning and Polishing Gold, Silver, Copper, Nickel, Brass, Glass and all kinds of Metal Surfaces; Free from Grit or Acids; Put up in Round Cardboard Boxes, Containing 3 ounces; Weight per dozen boxes about 3 lbs. \$1.25

One Dozen Boxes in a Case.

METAL POLISH.

PURITY* PASTE.



For Cleaning and Polishing Gold, Silver, Cut Glass, Jewelry, China, Porcelain, Nickel, Burnished Brass and Marble Statuary; Excellent for Porcelain Bath Tubs, also Glass Paint, Enamel, etc., Absolutely FREE FROM GRIT, ACIDS, ALKALIES OR GREASE; Will not Mar, Stain or Discolor Any Surface.

Per Dozen
No. 3MP—PASTE: Put up in Round Glass Jars 5 1/4 inches High, 2 1/2 inches in Diameter; Weight per dozen about 14 1/4 lbs. \$4.00

DIRECTIONS ON EACH JAR.

One Dozen in a Wood Case, with Heavy Wire Display Stand and Advertising Card.



PUTZ POMADE.
"Helmet Brand."

For Cleaning and Polishing all kinds of Metal.

Per Dozen Boxes
No. 0—3 oz. Tin Boxes; Weight per dozen boxes about 2 lbs. \$1.25

One-half Dozen in a Package.

No. 1—1 lb. Cans; Weight per dozen cans about 12 lbs. 7.50

One-sixth Dozen in a Package.



POLISHINE.
Pomade.

For Cleaning and Polishing all kinds of Metal or Glass Surfaces; Free from Grit or Acids.

Per Dozen Boxes
No. 7P—3 oz. Tin Boxes; Weight per dozen boxes about 2 1/2 lbs. \$1.25

One Dozen Boxes in a Package.



METAL POLISH.

POLISHINE LIQUID.

For Cleaning and Polishing all kinds of Metal, Gold, Silver, Aluminum, Tin, Copper, Brass, Zinc, or Glass Surfaces; Free from Grit, Acids or Dangerous Explosives.

Per Dozen Cans	
No. 0P— $\frac{1}{2}$ Pint Cans; Weight per dozen cans about 3 lbs.	\$1.25
No. 1P— $\frac{1}{2}$ Pint Cans; Weight per dozen cans about 7 lbs.	3.00
No. 2P—1 Pint Cans; Weight per dozen cans about 12 lbs.	5.40
Three Dozen in a Case.	
No. 3P—1 Quart Cans; Weight per dozen cans about 21 lbs.	9.00
Two Dozen in a Case.	

ENGINEERS' FILLERS.



Made of 20 Gauge Cold Rolled Coppered Steel; Seamed Bottom; Reinforced Bent Spout; Soldered Flat Handle; Threaded Filler Cap $\frac{1}{8}$ Inch Diameter.

No.		210
Diameter at Bottom, inches	5	
Capacity, pints	2	
Length of Spout, inches	5 $\frac{1}{2}$	
Height, inches	5	
Weight per dozen about, lbs.	12	
Per dozen		\$20.00

MACHINE OILERS.

MALLEABLE.

Solid Malleable Iron Tank, Copper Bronze Finish; Soldered Brass Bottom; With Threaded Steel Seamed and Brazed Spout, Tinned.



Nos.		1M	2M	3M
Diameter at Bottom, inches	3 $\frac{1}{2}$	3 $\frac{1}{4}$	3 $\frac{3}{4}$	
Capacity, pints	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	
Length of Spout, inches	3	3	3	
Height over all, inches	6	6	6	
Weight per dozen about, lbs.	2	3	4	
Per dozen		\$3.60	4.00	4.40

One Dozen in a Cardboard Box.

MACHINE OILERS.



CHACE.

Seamless Tank; Soldered Spring Bottom; Threaded Straight Spout, Seamed and Soldered.
ZINC; TIN BOTTOM.

Nos.		0Z	1Z	2Z	3Z
Diameter at Bottom, inches	2 $\frac{1}{4}$	2 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{3}{4}$	
Capacity, pints	$\frac{1}{2}$	$\frac{3}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	
Length of Spout, inches	2 $\frac{1}{4}$	2 $\frac{3}{4}$	4 $\frac{1}{4}$	4 $\frac{3}{4}$	
Height over all, inches	4	4 $\frac{1}{4}$	7	7	
Weight per dozen about, lbs.	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	
Per dozen		\$1.25	1.50	2.00	2.25
Nos.		4Z	5Z	6Z	
Diameter at Bottom, inches	4 $\frac{1}{4}$	4 $\frac{1}{2}$	4 $\frac{3}{4}$		
Capacity, pints	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$		
Length of Spout, inches	4 $\frac{3}{4}$	5	5		
Height over all, inches	7 $\frac{1}{4}$	8 $\frac{1}{2}$	9		
Weight per dozen about, lbs.	$\frac{3}{4}$	1 $\frac{1}{4}$	1 $\frac{1}{2}$		
Per dozen		\$2.75	3.50	4.50	

BRASS; BRASS BOTTOM.

Nos.		3/CB	4/CB	5/CB	
Diameter at Bottom, inches	3 $\frac{3}{4}$	4 $\frac{1}{4}$	4 $\frac{3}{4}$		
Capacity, pints	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{3}{4}$		
Length of Spout, inches	8	8	8		
Height over all, inches	10 $\frac{1}{2}$	11	11 $\frac{1}{4}$		
Weight per dozen about, lbs.	3 $\frac{1}{2}$	4	4 $\frac{1}{4}$		
Per dozen		\$4.42	4.75	6.00	

COPPER; BRASS BOTTOM.

Nos.		2/C	3/C	4/C	5/C	6/C
Diameter at Bottom, in.	3 $\frac{1}{4}$	3 $\frac{3}{4}$	4 $\frac{1}{4}$	4 $\frac{3}{4}$	4 $\frac{3}{4}$	
Capacity, pints	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	
Length of Spout, in.	4 $\frac{1}{4}$	4 $\frac{1}{4}$	5	5	6	
Height over all, in.	7	7	8 $\frac{1}{2}$	9	9	
Wgt. Doz. about, lbs.	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{2}$	1 $\frac{1}{4}$	1 $\frac{1}{2}$	
Per dozen		\$3.75	4.25	5.00	6.25	8.00

No. 0Z, One Dozen; Balance One-half Dozen in a Cardboard Box.

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COPPERITE STEEL OILERS.



Seamless Coppered Steel Tank; Soldered Copper Bottom; Straight Steel Threaded Coppered Spout, Seamed and Brazed.

Nos.	12	13	14A
Diameter at Bottom, inches.....	2 3/4	3 3/4	3 3/4
Capacity, pints.....	1 1/2	3	3 1/2
Length of Spout, inches.....	2 1/2	3 3/4	3 3/4
Height over all, inches.....	4 1/2	7 1/2	7 1/2
Weight per dozen about, lbs.....	1 1/2	1 1/2	2 1/4
Per dozen.....	\$4.50	5.50	7.50

Extra Spouts for No. 14A Oilers \$2.75

One Dozen in a Cardboard Box.



Seamless Coppered Steel Tank and Oval Top, Soldered to Lower Section; 3/4 inch Threaded Filler Cap, with Vent Hole; Flat Coppered Steel Handle 3/4 inch Wide; Bent Steel Reversible Coppered Spout, Extra Long, Seamed and Brazed, with Threaded Hood.

Nos.	10	11
Diameter at Bottom, inches.....	3 3/4	4 1/4
Capacity, pints.....	1	2
Length of Spout, inches.....	12	18
Height over all, inches.....	16	24 1/4
Weight per dozen about, lbs.....	5	10
Per dozen.....	\$14.00	18.00

One-half Dozen in a Cardboard Box.



Seamless Coppered Steel Tank; Soldered Copper Bottom; Bent Steel Threaded Coppered Spout, Seamed and Brazed.

Nos.	14	16
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Diameter at Bottom, inches..... 3 3/4 4 1/4

Capacity, pints..... 3 3/4 3 3/4

Length spout, in. 9 9

Height over all, inches..... 11 1/2 12 1/4

Weight per dozen about, lbs..... 4 5

Per dozen.....\$6.50 10.50

Per Dozen

Extra Spouts for No. 14

Oilers \$4.25

One Dozen in a Cardboard Box.



Seamless Coppered Steel Tank; Soldered Copper Bottom; Straight Steel Threaded Coppered Spout, Seamed and Brazed.

No.	13A
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Diameter Bottom, inches 3 3/4

Capacity, pints..... 3 3/4

Length of Spout, inches. 5

Height over all, inches. 7 1/2

Wgt. per doz. about, lbs. 1 1/2

Per dozen.....\$6.00

Per Dozen

Extra Spouts for No.

13A Oilers \$3.25

One Dozen in a Cardboard Box.



Seamless Coppered Steel Tank and Seamless Coppered Steel Oval Top, Soldered to Lower Section; 1 inch Threaded Filler Cap with Vent Hole; Flat Coppered Steel Handle, 3/4 inch Wide, with Reinforced Grip; Bent Steel Reversible Coppered Spout, Seamed and Brazed, with Threaded Hood.

No.	101
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Diameter at Bottom, in. 4 1/4

Capacity, quarts..... 1

Length of Spout, inches. 12

Height over all, inches. 18

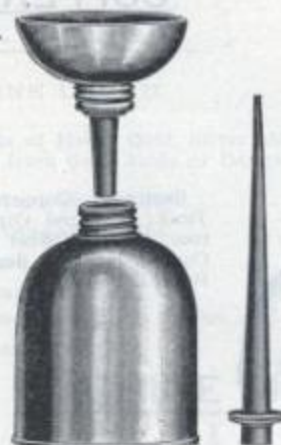
Wgt. per doz. about, lbs. 10

Per dozen.....\$18.00

One-half Dozen in a Cardboard Box.

COMBINATION OILER AND FUNNEL.

WILLIAMSON'S.



Showing No. 832 taken apart—
Funnel being inserted in
Body of Oiler.

No. 832—Capacity $\frac{1}{2}$ Pint; Diameter 3 inches; Height to Top of Body $3\frac{1}{4}$ inches; Length of Oiler, over all, 9 inches; Diameter of Funnel $2\frac{3}{4}$ inches; Length of Funnel, over all, $2\frac{3}{4}$ inches; Length of Funnel Spout $1\frac{1}{2}$ inches; Weight per dozen about 5 lbs. \$4.00

Per Dozen

Copper Plated Seamless Sheet Steel Body, with Stamped Threaded Collar and Spring Steel Bottom, Securely Soldered on.

Fitted with Combination Removable Funnel and Spout Retainer, made of Copper Plated Seamless Sheet Steel with Stamped Collar and Soldered Spout.

5 inch Copper Plated Steel Oiler Spout, fitted with Steel Flange and Leather Washer.

The Patent Removable Top on this Oiler is a Complete Funnel in itself and can be used as such wherever a Funnel is required, making it a very handy arrangement for Filling Oilers, etc.

To Adjust the Spout, Insert through the Bottom of Funnel, which will fit snugly into the Collar, the Funnel or Top can then be screwed to the Oiler, making it ready for use.

One Dozen in a Cardboard Box.

INDESTRUCTIBLE ENGINEERS' OILER SETS.

Nos. C30 to N60.

Made of No. 20 B. & S. Gauge Brass. Bottoms are made of Tempered Spring Steel. Highly Polished and Lacquered. Bushings of solid Brass, Machine Cut. Leather Washers are cut from split sides. These Oilers can be furnished with Brass Bottoms if desired, at no extra expense.

WITH ROUND TRAY.

No. C/30—5 Pieces, Copper Plated (counting Tray).....	Each \$ 5.00
No. C/40—6 Pieces, Copper Plated (counting Tray).....	7.00
No. N50 —5 Pieces, Nickel Plated (counting Tray).....	7.00
No. N60 —6 Pieces, Nickel Plated (counting Tray).....	10.00

One Set in a Cardboard Box.

Nos. C/30 and C/40 about 4 lbs per Set, Nos. N50 and N60 about 5 lbs per Set.

- 2351 -

ENGINEERS' OILERS.**BALL VALVE.**

1C Tin, Seamed and Soldered; Stamped Tin Concave Screw Cap; Patent Clamped Air Valve Spout with Lead Ball for Regulating Air Inlet, which Causes a Drip without Thumb Pressure; Galvanized Iron Bottom; Flat Tin Handle.



Nos.	2E	3E
Diameter at Bottom, in.	3 1/4	3 1/2
Capacity, pints	1	2 1/4
Length of Spout, inches	7	7
Height over all, inches	12	12 1/2
Wgt. per doz. about, lbs.	6	8
Per dozen	\$3.25	3.75

DRIP.

IXX Polished Tin, Double Seamed and Soldered; Cone Top; 1/2 inch Screw Filler Cap, with Vent Hole; Flat Tin Handle; Sheet Steel Threaded Bent Spout.



Nos.	220	221	222
Diameter at Bottom, inches	3	3 1/2	3 3/4
Capacity, pints	1	1 1/2	2
Length of Spout, in.	7	7	7
Height over all, in.	12 1/2	13	13 1/2
Weight per dozen about, lbs.	6	8	10
Per dozen	\$3.75	4.25	4.50

One-half Dozen in a Cardboard Box.

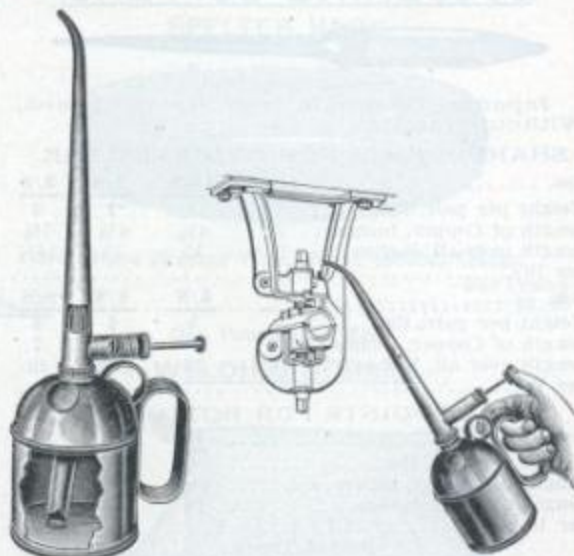
GOODWIN'S.

IXX Tin, Double Seamed and Soldered; Double Beaded Body; Cone Shaped Top, with Spring Lever Shut-off to Regulate Flow; 1/2 inch Screw Filler Cap, with Vent Hole; Flat Tin Reinforced Handle; Threaded Bent Spout.



Nos.	617	521
Diameter at Bottom, in.	3 1/4	4
Capacity, pints	1	2
Length of Spout, inches	4 1/2	6 1/2
Height over all, inches	17	21
Wgt. per doz. about, lbs.	7	10
Per dozen	\$7.00	8.00

Packed Loose.

**CANNON.**

The Cannon Oiler has full Control of the Flow of Oil in any position in which the Can may be held. The Patent Plunge Cylinder makes it possible to either deposit in any place where the Spout will enter, One Drop of Oil, or the Tank may be entirely emptied with a few strokes of the Plunger.

Double Seamed and Soldered; Oval Top; 1/2 inch Screw Filler Cap, with Vent Hole; Fitted with Pump Cylinder and Thumb Plunger, which Pumps the Oil through the Spout; Flat Braced Handle and Finger Grip; Threaded Bent Spout, Seamed and Soldered.

IX TIN, WITH BRASS CYLINDER AND PLUNGER.

Nos.	20T	21T	22T	23T
Diameter at Bottom, inches	3	3 1/2	3 3/4	4
Capacity, pints	1	1 1/2	2	2 1/2
Length of Spout, inches	6	8	12	20
Height over all, inches	9 1/2	12	17 1/2	26
Weight per dozen about, lbs.	6	8	10	12
Per dozen	\$9.00	10.00	11.00	13.00

ALL BRASS.

Nos.	21B	22B	23B
Diameter at Bottom, inches	3 1/2	3 3/4	4
Capacity, pints	1	1 1/2	2
Length of Spout, inches	8	12	20
Height over all, inches	12	17 1/2	26
Weight per dozen about, lbs.	8	10	12
Per dozen	\$16.00	18.00	21.00

One-half Dozen in a Cardboard Box.

TRADE MARK:
"STERLING" AND "KEEP KOOL,"
REGISTERED.

SOLDERING COPPERS.



Showing Sharp Point.
Japanned Wrought Iron Welded Shank,
Without Handle.

SHARP POINTS FOR ORDINARY USE.

Nos.	1/8	1 1/8	2/8	3/8
Weight per pair, lbs.	1	1 1/2	2	3
Length of Copper, inches.	3	4 1/4	4 1/2	5 1/2
Length over all, inches.	11	12	13	14 1/2
Per lb.	\$.....	\$.....	\$.....	\$.....
Nos.	4/8	5/8	6/8	8/8
Weight per pair, lbs.	4	5	6	8
Length of Copper, inches.	5 3/4	6	6 1/4	7
Length over all, inches.	16	16	17 1/4	19
Per lb.	\$.....	\$.....	\$.....	\$.....

FLAT POINTS FOR BOTTOMS.

Nos.	4F	5F	6F
Weight per pair, lbs.	4	5	6
Length of Copper, inches.	4 1/2	5 1/4	6
Length over all, inches.	16	16	17 1/4
Per lb.	\$.....	\$.....	\$.....

Packed Loose.

When One (1) Only is Wanted, Order as Half-Pair.

SOLDERING COPPER HANDLES.



No. 15—Plain Pine Wood, Natural Finish, with
Wired Shank; Diameter 1 1/2 inches; Length
5 3/4 inches; Weight per dozen about 2 1/2 lbs. \$0.75
Packed Loose.

SOLDERING KITS.

For Family Use.



Economy—Consists of Soldering Iron, Scraper,
Box of Rosin and Small Bar of Solder;
Ready for Family Use..... \$3.00
Length of Iron over all 10 1/4 inches.
Put up in a Wood Box; Weight per Dozen about 4 lbs.

SOLDER.



Tinkers' put up in Two and Quarter Ounce Bars
for Tinkers' and Family use..... \$24.00
One Gross in a Box; Weight per Box about 22 lbs.

SOLDER.

A Composition of Lead and Tin.



Sterling*, Warranted Strictly Half and Half
Solder Per Pound
Weight per Bar about 2 1/4 lbs.



No. 1—ROOFING SOLDER; Weight per bar
about 1 1/2 lbs. Per Pound

No. X—REGULAR HALF AND HALF SOLDER;
Weight per bar about 2 1/2 lbs.

No. XX—STRICTLY HALF AND HALF SOLDER;
Weight per bar about 2 lbs.
100 lbs. in a Wood Box.



Electric, For mending Tin, Enameled and Alumi-
num Ware Per Dozen
100 Bunches in a Box; Weight per Box about 3 1/2 lbs.

BABBIT METAL.



A Composition
of Lead, Tin
and Anti-
mony.

No. 1905—E. C. Simmons' Keep Kool*, Highest
Grade, Anti-friction Babbitt Metal, Three
Sections to the Bar Per Pound
18 Bars in a Wood Box; Weight about, per Bar, 6 lbs.;
per Box 120 lbs.



Banner*, High Grade Babbitt Metal Per Pound
Weight per Bar about 5 lbs.; 8 Bars in a Box; Weight
per Box about 65 lbs.



"Magnolia," Anti-friction Per Pound
Weight per Bar about 7 lbs.; 8 Bars in a Wood Box;
Weight per Box about 65 lbs.



Nos.	X	XX	XXX
Weight per bar about, lbs.	7	7	7
Per pound	\$.....	\$.....	\$.....
Packed 8 Bars in a Box; Weight per Box about 65 lbs.			

Genuine—BABBIT METAL; A Composition of Tin,
Antimony and Copper Per Pound
Weight per Bar about 4 lbs.; Packed 8 Bars in a Box;
Weight per Box about 45 lbs.



BRAZING MATERIALS.

SPELTER.



Medium.

Cuts show actual size of grain.

No. 20—Medium Grain Per Pound .50

One Pound in a Paper Box.

BRAZOL



Brazol will Braze Cast Iron, Steel, Malleable Iron Castings and Cast Steel; The only Compound that will Successfully Braze Cast Iron as well as other materials. Box contains ½ pound each No. 1 and No. 2 Brazol, to be used with Spelter.

No. 150—Brazol Per Box \$1.00

Shipped in Original Boxes only; Weight Each about 1 lb.

SPELTER WIRE.



Soft Brass Brazing Wire, No. 25 (Stubs) Gauge.

No. 25 Per Pound \$0.60

One Pound in a Roll.

WELDING BORAX.



Borax, Crushed, for Welding Purposes; Packed in Sacks of about 100 lbs. each Per Pound \$0.25

SOAPSTONE.

Dries the Inside of Casing and makes it easy to Insert Inner Tube in Double-tube Tire. Will not Injure the Tire.

No. 433—Powdered, Best Quality Per Pound \$0.20

Packed Loose.

METAL HAND LAMPS.

WE MAKE NO CHARGE FOR PACKING.

FOR
COAL OIL.



Polished Brass; Height to Top of Burner 3¼ inches; Capacity ¾ Pint; Simplex Burner and No. 1 Flat Wick; BURNS WITHOUT CHIMNEY.

No. 22F Per Dozen \$2.50



Polished Brass; Height to Top of Burner 3¼ inches; Capacity ¾ Pint; Union Ratchet (Round) Burner and Pet Round Wick; BURNS WITHOUT CHIMNEY.

No. 22R Per Dozen \$2.50

One-half Dozen in a Cardboard Box; Weight per Dozen about 2 lbs.

—2562—

BLOW TORCHES.

FOR GASOLINE.



Heavy Drawn Seamless Brass Top and Body; Heavy Brass, Soldered, Concave Bottom, with Cast Brass Filler Plug; Can be Filled without the use of a Funnel; Pump in Handle, Soldered to Body; Cast Brass Burner and Pipe, Screwed to Tank; Cast Iron Drip Cup.

Cast Iron Grip on Needle Valve.

No. 3—Capacity about 1 Pint; Weight each about 1 3/4 lbs. Each \$4.50



Wood Handle on Needle Valve. Pump in Handle, with Check Valve.

No. 18—Capacity 1 Pint; Weight each about 3 1/2 lbs. Each \$4.50



Heavy Brass Body; Cast Brass Top and Bottom Plates; Entire Tank 2 inches Thick, with Cast Iron Side Support; Cast Brass Filler Plug; Pump in Handle (with Check Valve), Soldered to Body; Cast Brass Burner Screwed to Tank; Cast Iron Drip Cup; Wood Handle on Needle Valve.

No. 47—Capacity 1 Pint; Weight each about 5 lbs. Each \$6.00

Wrapped in Paper; Three in a Wood Box.



Heavy Drawn Seamless Brass Top and Body; Heavy Brass, Soldered Concave Bottom, with Cast Brass Filler Plug; Can be Filled without the use of a Funnel; Pump in Tank; Handle Screwed to Tank; Cast Brass Burner with Soldering Iron Attachment; Cast Iron Drip Cup and Pipe, Screwed to Tank; Cast Iron Grip on Needle Valve.

No. 32—Capacity 1 Quart; Weight each about 5 lbs. Each \$6.50



Heavy Drawn Seamless Brass Top and Body; Heavy Brass, Soldered, Concave Bottom, with Cast Brass Filler Plug; Can be Filled without the use of a Funnel; Pump in Handle with Check Valve, Soldered to Body; Cast Brass Burner; Cast Iron Drip Cup and Pipe, Screwed to Tank; Wood Handle on Needle Valve.

No. 29—WITHOUT SOLDERING IRON ATTACHMENT; Capacity 1 Quart; Weight each about 5 lbs. Each \$5.50



No. 30—WITH SOLDERING IRON ATTACHMENT; Capacity 1 Quart; Weight each about 5 1/4 lbs. Each \$6.00

Wrapped in Paper; One in a Wood Box.

DIRECTIONS FOR OPERATING ACCOMPANIES EACH TORCH.

-2561-



SOLDERING FURNACES.



GEM GASOLINE.

The Burner is Cylindrical in shape, made of Cast Iron, and cannot burn out. It is so constructed, and the shape is such, that the SOLDER from the Soldering Coppers CANNOT FALL INTO THE PERFORATIONS. It is Noiseless and a Powerful Heater. The heat is distributed full length of Coppers. It is Light and Provided with a Handle, making it Portable. It is supplied with Pneumatic Reservoir, which cannot be filled while burning. By the use of same all accidents are prevented. The Resting Plate on which Coppers rest, is but five inches from workman's bench, and Hood Opening is of sufficient size to admit the largest Coppers, which can be readily heated in a short time. It is also provided with a Sliding Cut-off and Drip Cup, of which knob is always cool. The Patent Rubber Bulbs used on our Furnace are of the best quality, and will wear for an indefinite time.

Sheet Steel Riveted Base; Compressed Air; Gasoline Reservoir; Riveted and Soldered; Shut-off Valve and Rubber Air Bulb; Cast Iron Hood; Riveted Handle; Complete with Burner.

Length over all 21 inches; Width of Base 7 inches; Height to Top of Reservoir 14½ inches.

No. 21—GEM; With Tin Reservoir.....	Each \$10.00
No. 22—GEM; With Copper Reservoir.....	12.00

One in a Crate; Weight each about 20 lbs.

EXTRA PARTS FOR GEM FURNACES.

No. 1—Bulbs, Good Quality; Weight each about ½ lbs.....	Each \$0.75
No. 2—Bulbs, Common Quality; Weight each about ½ lbs.....	.60
POTS—For Plumbers use; Weight each about 4 lbs.....	.75
HOODS—For Plumbers use; Weight each about 4 lbs.....	.75
BURNERS—Weight each about 1½ lbs.....	.75

Packed Loose.

TINNERS' STOVES.

FOR CHARCOAL.

Japanned Sheet Iron Body; 3 Cast Iron Legs and Base; Cast Iron Trap and Front Door; Cast Iron Top, with Sliding Door and Flue Hole for Stove Pipe Joint; 13 Gauge Wrought Iron Bail.

Per Dozen

No. 2—Diameter 8 inches; Height to Top Plate 15¼ inches; Weight each about 13 lbs. \$60.00
One-half Dozen in a Wood Box.



MELTING LADLES.



Malleable Iron Solid Lipped Cup; Riveted Iron Handle.

Diameter of Ladle, inches.....	3	4	5
Depth of Ladle, inches.....	1½	2½	3½
Length over all, inches.....	11½	12½	14½
Weight per dozen about, lbs.....	11	13	20
Per dozen.....	\$2.00	3.00	4.25

Packed Loose.

-2563-

FIRE POTS.

FOR GASOLINE.

One Gallon per Burner for Eight Hours Steady Work.



No. 1, One Burner.



No. 5, One Burner.

Heavy Galvanized Iron Tank, Lacquered; Bottom Protected by Heavy Cast Iron Ring, Soldered to Body; Brass Pump in Tank; Brass Filler Plug; Heavy Sheet Steel Black Japanned Removable Hood and Cover; Can Heat Kettle of Lead and a Pair of Soldering Irons at same time; Brass Burner on Swivel Joint; Iron Supply Pipe; Cast Iron Grip on Needle Valve; Ball $\frac{5}{32}$ inch Wire, with Wood Handle, Black Japanned.

Each
No. 1—Capacity 1 Gallon;
Weight each about 14
lbs. \$12.00

Each
No. 5—Capacity $\frac{1}{2}$ Gallon;
Weight each about 12
lbs. \$9.00



No. 10, with Bulb.



No. 20, with Pump.

Heavy Galvanized Iron Tank; Galvanized Cast Iron Top Plate and Bottom Ring, Soldered to Body; Brass Filler Plug; Removable Hood, Heavy Sheet Steel; COILED IRON BURNER and Stand Pipe; Brass Fittings; Cast Iron Grip on Needle Valve; Top Grate Cast Iron, fastened by Three $\frac{1}{4}$ inch Steel Rods screwed to Top Plate of Tank; $\frac{3}{8}$ inch Iron Wire Ball, with Wood Handle, Black Japanned.

Rubber Bulb and Hose Fastened to Brass
Fitting, with Check Valve.

Each.
No. 10—Capacity $\frac{1}{2}$ Gallon; Weight each about
13 lbs. \$6.00

Brass Pump in Tank.

Each.
No. 20—Capacity $\frac{1}{2}$ Gallon; Weight each about
13 lbs. \$6.50

Wrapped in Paper, One in a Wood Box.

DIRECTIONS FOR OPERATING ACCOMPANY EACH FIRE POT.

**EXTRA METAL POTS.**

Cast Iron, with Ball.

Per Dozen

No. MP5—4 $\frac{1}{2}$ inches in Diameter; Weight per dozen about 40 lbs. \$6.00

No. 6—5 $\frac{1}{2}$ inches in Diameter; Weight per dozen about 65 lbs. 8.00

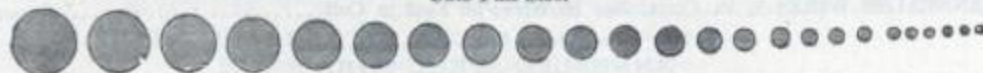
Packed Loose.

-982-

STEEL WIRE.



Cuts Full Size.



Annealed Plain, Smooth Fence Wire; In 100 lb. Bundles.

Nos.	6	7	8	9	10	11	12	12 1/2	13	14	15	16
Per lb.	\$0.10	.10	.10	.10	.11	.11	.11 1/2	.11 1/2	.12 1/2	.12 1/2	.14	.14

Nos. 13, 14, 15, 16 Annealed Fence Wire are USED FOR BAILING WIRE.

Galvanized Smooth Fence Wire; In 100 lb. Bundles.

Nos.	6	7	8	9	10	11	12	12 1/2	13	14	15	16
Per lb.	\$0.10	.10	.10	.10	.11	.11	.11 1/2	.11 1/2	.12 1/2	.12 1/2	.14	.14

Bright Market Wire; In 100 lb. Bundles.

Nos.	6	7	8	9	10	11	12	14	16
Per lb.	\$0.10	.10	.10	.10	.11	.11	.11 1/2	.12 1/2	.14

Coppered Market Wire; In 100 lb. Bundles.

Nos.	6	7	8	9	10	11	12	14
Per lb.	\$0.10	.10	.10	.10	.11	.11	.11 1/2	.12 1/2

NUMBERS AND SIZES OF WIRE BY STANDARD WIRE GAUGE.

Our Stock Spring Steel is Premier, which is Best Grade Made.

Table of Sizes, Weights and Lengths of Iron and Steel Wire.

Diam. Inches	Gauge No.	Diam. Inches	Pounds per Foot	Pounds per Mile	Feet per Pound	Feet per 2000 lbs.	Diam. Inches	Gauge No.	Diam. Inches	Pounds per Foot	Pounds per Mile	Feet per Pound	Feet per 2000 lbs.
1/2	.....	.500	.6625	3498.00	1.50	3018	.....	5	.207	.1135	559.28	8.81	17621
.....	7/0	.490	.6363	3359.66	1.51	3023	.....	6	.192	.0977	515.85	10.23	20471
1 1/2	.....	.468	.5804	3064.51	1.72	3445	3/16	.....	.187	.0926	488.92	10.79	21598
.....	6/0	.460	.5608	2961.02	1.78	3566	.....	7	.177	.0830	438.24	12.04	24096
7/16	.....	.437	.5061	2672.21	1.97	3952	.....	8	.162	.0696	367.48	14.36	28735
.....	5/0	.430	.4901	2587.72	2.04	4081	5/32	.....	.156	.0644	340.03	15.52	31056
1 3/4	.....	.406	.4368	2306.30	2.28	4578	.....	9	.148	.0580	306.24	17.24	34482
.....	4/0	.393	.4094	2161.63	2.44	4885	.....	10	.135	.0483	255.02	20.72	41408
3/8	.....	.375	.3726	1967.33	2.68	5367	1/8	.....	.125	.0414	218.59	24.15	48309
.....	3/0	.362	.3473	1833.74	2.87	5758	.....	11	.120	.0382	201.69	26.17	52356
1 1/2	.....	.343	.3117	1645.78	3.20	6412	.....	12	.105	.0292	154.17	34.24	68493
.....	00	.331	.2904	1523.31	3.44	6887	3/32	.....	.093	.0229	120.91	43.66	87336
5/16	.....	.312	.2579	1361.71	3.87	7755	.....	13	.092	.0224	118.27	44.64	89286
.....	0	.307	.2497	1318.41	4.00	8011	.....	14	.080	.0169	89.23	59.17	118343
.....	1	.283	.2123	1120.94	4.71	9420	.....	15	.072	.0137	72.33	72.99	145985
9/32	.....	.281	.2092	1104.57	4.78	9560	.....	16	.063	.0105	55.44	95.23	190476
.....	2	.263	.1834	968.35	5.45	10905	1/16	.....	.062	.0101	53.22	99.00	198020
1/4	.....	.250	.1656	874.36	6.03	12077	.....	17	.054	.00772	40.76	129.53	259068
.....	3	.244	.1578	733.18	6.33	12674	.....	18	.047	.00585	30.89	170.94	341882
.....	4	.225	.1342	708.57	7.45	14903	.....	19	.041	.00445	22.49	224.71	449438
7/32	.....	.218	.1259	664.75	7.94	15885	.....	20	.035	.00324	17.10	308.66	617328



ANNEALED WIRE (Am. Steel & Wire Co. Gauge).

Per Dozen

No. 19A—ANNEALED WIRE; ¼ lb. Coils; No. 19 Wire; 50 Feet in Coil \$1.00

One Dozen Coils in a Box.

ANNEALED STEEL WIRE.

Nos.	AB17	AB18	AB19	AB20	AB22	AB24
Wire Gauge, Nos.	17	18	19	20	22	24
Per lb.	\$0.15	.16	.19	.20	.22	.24

One Stone (12 lbs.) in a Bundle.

BRASS SPRING WIRE (Brown & Sharpe's Gauge).

BASS STAINLESS WIRE (Brown & Sharpe's Gauge)										
Nos.	BB2	BB3	BB4	BB5	BB6	BB7	BB8	BB9	BB10	
Wire Gauge, Nos.	2	3	4	5	6	7	8	9	10	
Per lb.	\$0.50	.50	.50	.50	.50	.50	.50	.51	.51	
Nos.	BB11	BB12	BB13	BB14	BB15	BB16	BB18	BB20	BB22	BB24
Wire Gauge, Nos.	11	12	13	14	15	16	18	20	22	24
Per lb.	\$0.51	.51	.51	.51	.52	.52	.54	.55	.59	.64

Sold Only in 5 lb. Bundles.

COPPER WIRE (Brown & Sharpe's Gauge).

Nos.	CB2	CB4	CB6	CB8	CB10	CB12	CB13	CB14
Wire Gauge, Nos.	2	4	6	8	10	12	13	14
Per lb.	\$0.56	.56	.56	.56	.57	.57	.57	.57
Nos.	CB15	CB16	CB17	CB18	CB19	CB20	CB22	CB24
Wire Gauge, Nos.	15	16	17	18	19	20	22	24
Per lb.	\$0.64	.64	.66	.66	.66	.70	.76	.76

Sold Only in 5 lb. Bundles.

BRASS AND COPPER WIRE GAUGES.

Some Manufacturers use Brown and Sharpe Gauge, While Others use a Stubbs Gauge. The difference, however, in above Gauges when No. 10 is passed is very slight. Annealed Wire is Drawn almost entirely to American Steel & Wire Co. Gauge.

MUSIC WIRE.



MUSIC WIRE (Nos. by Music Wire Gauge).

Drawn from Finest Steel, Spring Tempered; Particularly Adapted for Musical Instruments; Also used by Sewing Machine and other Manufacturers who Require First-class Springs, without Tempering; Is very Tough and Springy and is ready for use when Wound.

Nos.	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
Per lb.	\$7.00	6.25	4.80	5.00	3.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Nos.	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>	<u>30</u>	
Per lb.	\$1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50

One Pound in a Coil; Sold only in Full Coils.

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WIRE ON SPOOLS



ANNEALED HAIR WIRE; 1 OZ. SPOOLS.

Wire Gauge, Nos.	AS/28	AS/30	AS/32	AS/34
Per dozen spools.....	\$0.50	.50	.50	.50

TINNED HAIR WIRE; 1 OZ. SPOOLS.

Wire Gauge Nos.	28T	30T	32T	34T	36T
Per dozen spools.....	\$0.70	.70	.70	.70	.70

ANNEALED STEEL WIRE; ¼ LB. SPOOLS.

Shellac Coated; Old English Gauge.

Nos.	AS/17	AS/18	AS/19	AS/20	AS/22	AS/24	AS/26
Wire Gauge, Nos.	17	18	19	20	22	24	26
No. feet on spool.....	33	45	55	78	119	178	268
Per dozen spools.....	\$0.96	.96	1.02	1.02	1.10	1.14	1.20

TINNED ANNEALED STEEL WIRE; ¼ LB. SPOOLS.

Nos.	18T	20T	22T	24T
Per dozen spools.....	\$1.20	1.25	1.32	1.40

SOFT COPPER WIRE; 1 OZ. SPOOLS.

Nos.	18C	20C	22C	24C
Per dozen spools.....	\$1.00	1.00	1.00	1.00

SOFT COPPER WIRE; ¼ LB. SPOOLS.

Nos.	CS/16	CS/18	CS/20	CS/22	CS/24	CS/26
Wire Gauge, Nos.	16	18	20	22	24	26
Per dozen spools.....	\$2.20	2.20	2.20	2.40	2.60	2.70

SOFT COPPER WIRE; 1 LB. SPOOLS.

Nos.	CS/16/1	CS/18/1	CS/20/1	CS/22/1	CS/24/1	CS/26/1
Wire Gauge, Nos.	16	18	20	22	24	26
Per dozen spools.....	\$7.50	7.50	7.50	8.20	8.60	9.20

SOFT BRASS WIRE; 1 OZ. SPOOLS.

Nos.	18B	20B	22B	24B
Per dozen spools.....	\$0.80	.80	.80	.80

BRASS SPRING WIRE; ¼ LB. SPOOLS.

Nos.	BS/18	BS/20	BS/22	BS/24	BS/26	BS/28
Wire Gauge, Nos.	18	20	22	24	26	28
Per dozen spools.....	\$2.15	2.21	2.35	2.55	2.80	3.33

BRASS SPRING WIRE; 1 LB. SPOOLS.

Nos.	BS/18/1	BS/20/1	BS/22/1	BS/24/1	BS/26/1	BS/28/1
Wire Gauge, Nos.	18	20	22	24	26	28
Per dozen spools.....	\$6.60	6.84	7.24	8.40	9.02	10.40

One Dozen Spools in a Box. Spools Counted in Weight of Wire.

WIRE ASSORTMENT.

In Wood Display Case.



No. 76 Case—Assorted Spool Wire; Containing 147 Spools; Size of Case 15x13½x3 inches.....\$15.00

CONTENTS:

- 18—Small Spools SOFT COPPER WIRE, Six each Nos. 20C, 22C and 24C.
 18—Small Spools SOFT BRASS WIRE, Six each Nos. 20B, 22B and 24B.
 15—¼ lb. Spools BLACK ANNEALED STEEL WIRE, Three each Nos. AS/18, AS/20, AS/22, AS/24 and AS/26
 48—Small Spools BLACK ANNEALED STEEL WIRE, Twelve each Nos. AS/28, AS/30, AS/32 and AS/34.
 12—¼ lb. Spools TINNED ANNEALED STEEL WIRE, Three each Nos. 18T, 20T, 22T and 24T.
 36—Small Spools TINNED ANNEALED STEEL WIRE, Twelve each Nos. 28T, 30T and 32T.

147

Weight per Case about 16 lbs.

NOTE—The following Numbers contained in Assortment No. 76, are carried in Stock and can be bought separately for refilling purposes: Nos. 20C, 22C, 24C, 20B, 22B, 24B, AS/18, AS/20, AS/22, AS/24, AS/26, AS/28, AS/30, AS/32, AS/34, 18T, 20T, 22T, 24T, 28T, 30T and 32T.

HIGH BRASS.

The Term High Brass Designates Quality and not Temper. Contains a Larger Percentage of Zinc, and Less Copper than Low Brass.



In Rolls: 12 inches Wide; Suitable for

Spinning and General Use.

Gauge No.	12	14	16	18	20	22	24	26	28
Per lb	\$0.23	.23	.23	.23	.23	.23	.23	.24	.24

Full Rolls vary from 25 to 50 lbs. on each size.

Sold in any Quantity.

In Sheets: Half Hard, 24x48 inches.

Gauge No.	16	18	20	24
Weight per sheet about, lbs.	18	16	13	8
Per pound	\$0.34	.34	.40	.56

Sold Only in Full Sheets.

High Brass Measured with Brown and Sharpe's Gauge.

HOOP BRASS.

For Use on Wood Pails and Harness Trimmings.

No. 22—22 Gauge Hoop Brass.

Width, inches	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{2}$
Weight per foot about, lbs.	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{3}{8}$
Per lb. IN FULL ROLLS	\$0.40	.35	.35	.35	.35
Per lb. in LESS THAN FULL ROLLS	\$0.45	.40	.40	.40	.40

Weight per Full Roll, from 15 to 30 lbs.; Put up in Rolls Securely Wired.

**STENCIL SETS, STENCIL LETTERS AND FIGURES.**

Reese's Patent Adjustable.
Stamped from Sheet Brass.



Showing Use.

Reese's Alphabet, 33 Pieces, COMPLETE IN BOXES;

Consisting of 26 Letters, 1 Beginner; 1 Ender, 1 Period, 1 Apostrophe, 1 Comma, 1 Blank and 1 &.

Size of Letters, inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$
Weight per set about, ozs.	4	6	7	8
Per set	\$0.65	.70	.80	1.00

One Set in a Box.

Extra Single Stencil Letters.

Size of Letters, inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$
Per single dozen	\$0.34	.35	.43	.53

Reese's Figures, 15 Pieces: COMPLETE IN BOXES;

Consisting of 1 Figure each, Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 0; \$ Mark, 1 Cent Mark, 1 Period, 1 Beginner, 1 Ender.

Size of Figures, inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$
Weight per set about, ozs.	2	3	$3\frac{1}{2}$	4
Per set	\$0.25	.30	.35	.45

One Set in a Box.

Extra Single Stencil Figures.

Size of Figures, inches	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$
Per single dozen	\$0.34	.38	.43	.53

Packed Loose.

The Reese's Letters and Figures are made with a Beaded Lock on the Edge, so that they can be Joined Together, thereby enabling you to form any Word, Name or Address, and after using they can be distributed and formed again for another address.

The Letters, when Joined, are Perfectly Level on the Under Side, and are Accurately Spaced, making a Perfect Print. The most practicable thing for Shippers, Manufacturers, Merchants, Real Estate Men, Millers, Distillers, Farmers, Planters—in fact, a great time saver to anyone having any marking or stencilling to do. Especially Adapted for Printing Signs, Show Cards and Prices, Marking Bags, Boxes, Barrels, Bales, Robes, Trunks, Packages, Etc.

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DIXON'S CRUCIBLES.



Dixon's Crucibles and Covers.

Nos.	0	00	000	0000	1	2	3	4
Height Outside, inches	2	2 1/8	2 1/2	3	3 1/8	4 1/2	5 1/4	5 5/8
Diameter at Top, Outside, inches	1 1/2	1 7/8	1 7/8	2 3/8	3 1/8	3 3/4	4 1/4	4 5/8
Diameter at Bilge, Outside, inches	1 5/8	1 7/8	2 1/8	2 1/2	3	3 5/8	4 1/8	4 1/2
Diameter at Bottom, Outside, inches	1 1/4	1 5/8	1 1/2	1 3/4	2 1/4	2 3/4	3	3 1/4
Without Covers, each	\$0.20	.20	.20	.20	.30	.35	.40	.45
Covers only, each	\$0.16	.16	.16	.16	.18	.18	.18	.18

Nos.	5	6	7	8	9	10	12	14	16	18
Capacity, quarts	3/4	1	1 1/8	1 1/4	1 3/8	1 1/2	2	2 1/2	2 3/4	3 1/2
Height Outside, inches	6	6 1/2	6 3/4	7 1/4	7 5/8	8	8	8 1/2	8 3/4	9 3/4
Diameter at Top, Outside, inches	4 1/8	5 1/4	5 1/2	5 3/4	6	6	6 1/4	6 3/4	7	7 3/8
Diameter at Bilge, Outside, inches	4 3/4	5 1/8	5 1/2	5 3/4	6 1/4	6 1/2	6 3/4	7 1/4	7 1/2	8
Diameter at Bottom, Outside, inches	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/2	5 1/2	5 3/4
Without Covers, each	\$0.50	.55	.60	.65	.70	.75	1.20	1.40	1.60	1.80
Covers only, each	\$0.18	.23	.23	.23	.23	.23	.33	.33	.33	.33

Nos.	20	25	30	35	40	45	50	60	70	80
Capacity, gallons	1	1 1/8	1 3/8	1 5/8	2	2 1/4	2 3/4	3	3 1/4	3 5/8
Height Outside, inches	10 1/4	10 3/4	11	11 5/8	12 3/8	13	13 1/2	14	14 1/2	15 3/8
Diameter at Top, Outside, inches	7 3/4	8	8 5/8	9 1/4	9 1/4	9 3/4	10 1/8	10 3/8	10 7/8	11 1/8
Diameter at Bilge, Outside, inches	8 3/8	8 5/8	9 1/8	9 3/4	10 1/4	10 1/2	11 1/4	11 3/8	12	12 3/8
Diameter at Bottom, Outside, inches	8	8 1/4	8 1/2	9	9 1/4	9 3/4	10	10 1/4	10 3/4	11 1/8
Without Covers, each	\$2.00	2.25	2.70	3.15	3.60	4.05	4.50	5.40	6.30	7.20
Covers only, each	\$0.33	.37	.38	.44	.50	.57	.63	.75	.88	1.00

Nos.	90	100	125	150	175	200	225	250	275	300
Capacity, gallons	4	4 5/8	4 7/8	6 1/4	7 1/8	9 1/8	10 3/8	10 3/4	11 1/4	12 1/2
Height Outside, inches	15 7/8	16	16 5/8	18 1/4	19 1/2	20 1/2	20 3/4	20 3/2	22 3/8	22
Diameter at Top, Outside, inches	11 1/2	11 7/8	12 1/2	13 1/4	14 1/4	15	15 1/4	15 3/4	16	16 1/4
Diameter at Bilge, Outside, inches	12 1/2	13 3/8	13 3/4	14 3/4	15 3/4	16 1/2	16 3/4	17	16 5/8	17 1/2
Diameter at Bottom, Outside, inches	9	9 3/8	9 1/2	10 3/8	10 3/4	11 1/4	12 1/2	11 3/4	12 1/2	12 1/2
Without Covers, each	\$8.10	9.00	11.25	13.50	16.75	18.00	20.25	22.50	24.75	27.00
Covers only, each	\$1.13	1.25	1.57	1.88	2.19	2.50	2.82	3.13	3.44	3.75

Packed as Ordered.



DIXON'S PURE FLAKE LUBRICATING GRAPHITE.

NUMBERS AND SIZES OF PACKAGES.

No.	Per Case
No. 632— 1 pound Paper Cans (36 in a Case)	\$14.40
No. 633— 5 pound Tin Cans, Screw Top (10 in a Case)	17.00
No. 634— 10 pound Tin Cans, Screw Top (5 in a Case)	16.00
No.	Per Pound
No. 644— 25 pound Paper Bag enclosed in Case	.35
No. 645— 50 pound Paper Bag enclosed in Case	.33
No. 646— 100 pound Keg	.30
No. 646— 200 pound Half Barrel	.30
No. 647— 350 pound Barrel	.28

The above Packages are Regular Graphite; If Finely Pulverized Graphite (known as No. 2) is Wanted, Specify on Order.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**.
REGISTERED.



Prizes Awarded **KEEN KUTTER** Cutlery



Fac-Simile Certificate of Grand Prize Awarded to Simmons Hardware Company
for **KEEN KUTTER** Cutlery.

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Prizes Awarded **KEEN KUTTER** Cutlery.



GRAND PRIZE

Awarded to the Simmons Hardware Company for the Superior Excellence of Quality and Finish of their **KEEN KUTTER** Cutlery in competition with the World's Best Productions, by the International Jury of Awards, at the Louisiana Purchase Exposition, held at St. Louis, Mo., U. S. A. 1904.



HIGHEST AWARD.

Given to the Walden Knife Company and Simmons Hardware Company for the Superior Excellence of Quality and Finish of their Walden and **KEEN KUTTER** Pocket Knives, in competition with the World's Best Productions at the Lewis and Clark Centennial Exposition, Portland, Oregon, U. S. A. 1905



KEEN KUTTER POCKET KNIVES.

HOW THEY ARE MADE.



The above is a photograph of Mr. Holden, one of the workmen of the Walden Knife Company, who for over thirty years has been **Forging by Hand** the Blades for our **KEEN KUTTER** Pocket Knives.

Mr Holden is now 72 years of age, and has spent his entire life in the manufacture of Pocket Knives, having learned the trade directly from his father, and after learning the trade, has spent a number of years in the factories of Joseph Rodgers & Sons, and Geo. Wostenholm & Son, Sheffield, England.

He is a man of artistic temperament in many ways, thoroughly honorable in every respect, and absolutely loyal to his faith in the superiority of **KEEN KUTTER** Hand Forged Pocket Knives over all other brands. He fairly represents the type of English workmen by whom nearly every number of our entire line of **KEEN KUTTER** Pocket Knives is made.



WHERE **KEEN KUTTER** POCKET KNIVES ARE MADE—NEW YORK STATE.
THE LARGEST FACTORY OF ITS KIND IN THE UNITED STATES.

Water Power
from these Falls
used to run our
KEEN KUTTER
Tool Factory.



Location of one
of our
KEEN KUTTER
Tool Factories
in
New Hampshire.

WHERE **KEEN KUTTER** TOOLS ARE MADE.

The Mark



—AND—

The Motto

"The Recollection of QUALITY
Remains long after the PRICE
is forgotten."

E. C. Simmons

TRADE MARK REGISTERED

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KEEN KUTTER POCKET KNIVES

HOW THEY ARE MADE.

Pocket Blades.



No. 1—Pocket Blade, for No. K2420, Partially Forged; Showing Steel Bar from which it is being Fashioned.



No. 2—Pocket Blade Forged, Ready for Hardening and Tempering or Grinding.



No. 3—Pocket Blade Ground, Ready for Drilling and Filing, or Drilling and Squaring.



No. 4—Pocket Blade Ready for Assembling, Filed and Dressed, or Drilled, Squared and Dressed.

 Pen Blades.


No. 1—Pen Blade for No. K2420, Partially Forged; Showing Steel Bar from which it is being Fashioned.



No. 2—Pen Blade Forged, Ready for Hardening and Tempering or Grinding.



No. 3—Pen Blade Ground, Ready for Drilling and Filing, or Drilling and Squaring.

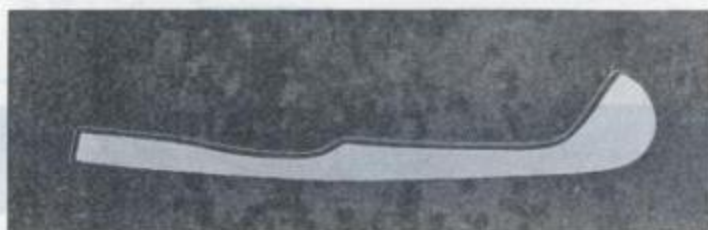


No. 4—Pen Blade Ready for Assembling, Drilled, Filed and Dressed, or Drilled, Squared and Dressed.

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KEEN KUTTER POCKET KNIVES.

HOW THEY ARE MADE.



No. 5—Spring Steel, from which Spring is Produced.



No. 6—Spring, Dressed and Drilled, Ready for Adjusting.

No. 7—Spring Adjusted, Filed, Hardened, Tempered and Dressed.



No. 8—Sheet Brass, from which Linings are Pressed.



No. 9—German Silver, from which Bolsters are made.



No. 10—Blank for Bolster, Pressed Ready for Stamping.



No. 11—Bolster Stamped up, Ready to Fasten to Lining.



No. 12—Brass Strip, Pierced, Ready to Receive Bolster.



No. 13—Bolsters "Chopped on" Lining, Ready for Passing through Pattern Dies.



No. 14—Scale Pressed, Ready for Drilling.

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KEEN KUTTER POCKET KNIVES.

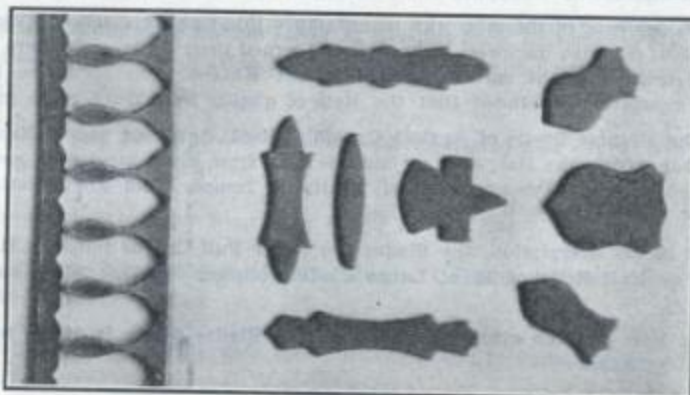
HOW THEY ARE MADE.



No. 15—Handle Covering Ready for Fitting.



No. 16—Covering Fitted, Ready for Name Plate.



No. 17—Name Plates, or Shields, and German Silver from which they are made.



No. 18—Scales, with Covering Fitted, Showing Name Plate and Reverse Side, Ready for Assembling Into Handle.



No. 19—Division Scale, or Center Lining.



No. 20—Knife Ready for Final Adjusting—Note Loose Rivets and General Rough Appearance of Knife.



No. 21—The Finished Article.



INFORMATION REGARDING **KEEN KUTTER** POCKET KNIVES.

It is our aim to furnish, under the **KEEN KUTTER** Brand, the Highest Quality of Pocket Cutlery which can be produced. That we have accomplished this is shown by the Awards for the Highest Quality, granted to this line at the Louisiana Purchase Exposition, held in St. Louis, Mo., in 1904, and the Lewis & Clark Exposition, held in Portland, Ore., in 1905, illustrations of which are shown on pages 2634 and 2635. We believe this result cannot fail to follow from the method which we use in the manufacture of the goods.

It is our constant aim to see that everything about the line is of absolutely the Highest Quality, from the selection of the Raw Material to the Wrapping and Packing of the finished product.

Workmanship—Nearly 90 per cent of the men who manufacture this line were schooled in the art of making Fine Cutlery in the best English factories, where they learned their trade, and where their fathers and grandfathers spent their lives in the manufacture of Pocket Knives. The men are liberally paid for their work, and are constantly reminded that the item of quality is of much more importance than quantity.

Blades are made from the Highest Grade of English Crucible Steel, imported especially for the purpose. They are Forged by hand from the Bar, and not stamped out from sheet steel (the method employed by many makers of Knives). They have an absolutely Uniform Temper, and are Whetted by Hand on an Oil Stone to a Sharp Cutting Edge, Ready for Use.

As specified in the description, the Blades are either Full Crocus Polished (i. e., each Blade Polished on Both Sides) or Half Polished (i. e., Large Blade Polished on One Side and other Blades Glazed Finish).

Patterns of Blades—The line contains every possible shape of Blades which is at all practical, as is shown by the following illustrations:



Razor.



Saber.



Wharncliffe.



Clip.



Spear.



Budding.



Spey.



Pruning.



Sheep Foot.



Razor.

TRADE MARK:
E. C. SIMMONS' **KEEN KUTTER**,
REGISTERED.

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Information Regarding **KEEN KUTTER** Pocket Knives (Continued).

Coverings—As illustrated in their Natural Colors

German Silver—Producing an appearance quite similar to Sterling Silver.

Pearl—Obtained through the London markets from the Dutch East Indies and Australian Fisheries, where the Highest Quality of Pearl is found.

Genuine Ivory—Obtained from the elephants of the West Coast of Africa, where the Ivory is found to be much Superior in Quality—especially in hardness—to that of the Eastern Coast, and of Asia.

Cut Stag—Made by Artificially Cutting the Second Layer of Genuine Stag, or sometimes Bone, and carefully coloring until it so closely resembles Genuine Stag, both in its irregular surface, and color, as to be difficult to distinguish from the real article.

White Bone—The shin bone of beef cattle, which, when carefully selected and cured, gives a covering capable of High Finish and Good Wearing Qualities.

Aluminum—Which is especially adapted for Engraving Fancy Decorations.

Genuine Stag—Outside cut of the horn, obtained from Hungary, Bohemia, Ceylon and China, which countries produce the Highest Quality of Stag.

Tortoise Shell—Obtained chiefly from the Hawk's Bill Tortoise, found in various parts of the world, especially in Asia and Australia.

Buffalo Horn—From the Buffaloes of Siam and India.

Cocobolo—A hard, red wood of very fine grain, which grows chiefly on the Isthmus of Panama.

Genuine Ebony—A hard, black wood of very fine grain, obtained chiefly from the East Coast of Africa and Madagascar.

Celluloid—A manufactured composition; produced either Transparent or in a great Variety of Colors. It may be made in Imitation of almost any of the other coverings which are used on the Knives, except German Silver.

Linings—The Linings are of German Silver, Brass or Steel, whichever is best adapted to the particular Knife on which it is used. The outside edges are Milled (or Knurled), in several of the more expensive patterns.

Bolsters—The Bolsters are, in the great majority of cases, of German Silver, or in a few cases, on the heavier Knives, of Steel.

Rivets—The Rivets are of German Silver and Steel.

Shields are made of German Silver, in various shapes and sizes, as best adapted to each individual pattern.

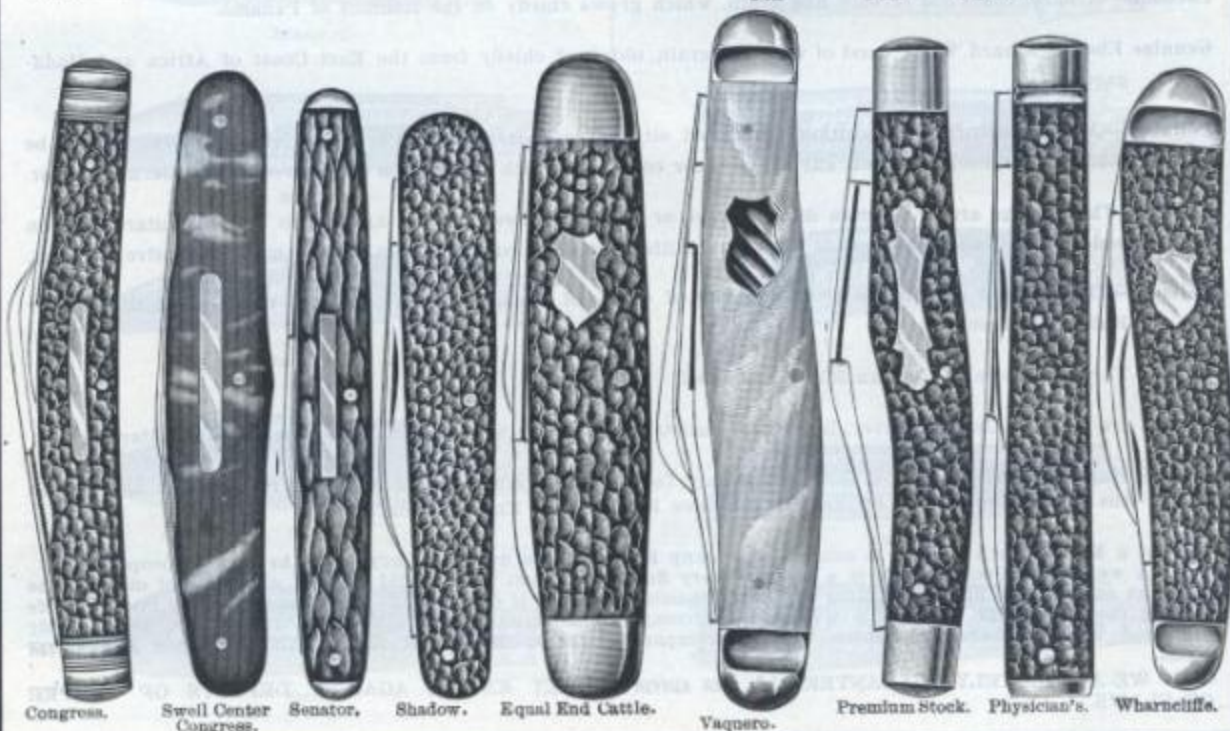
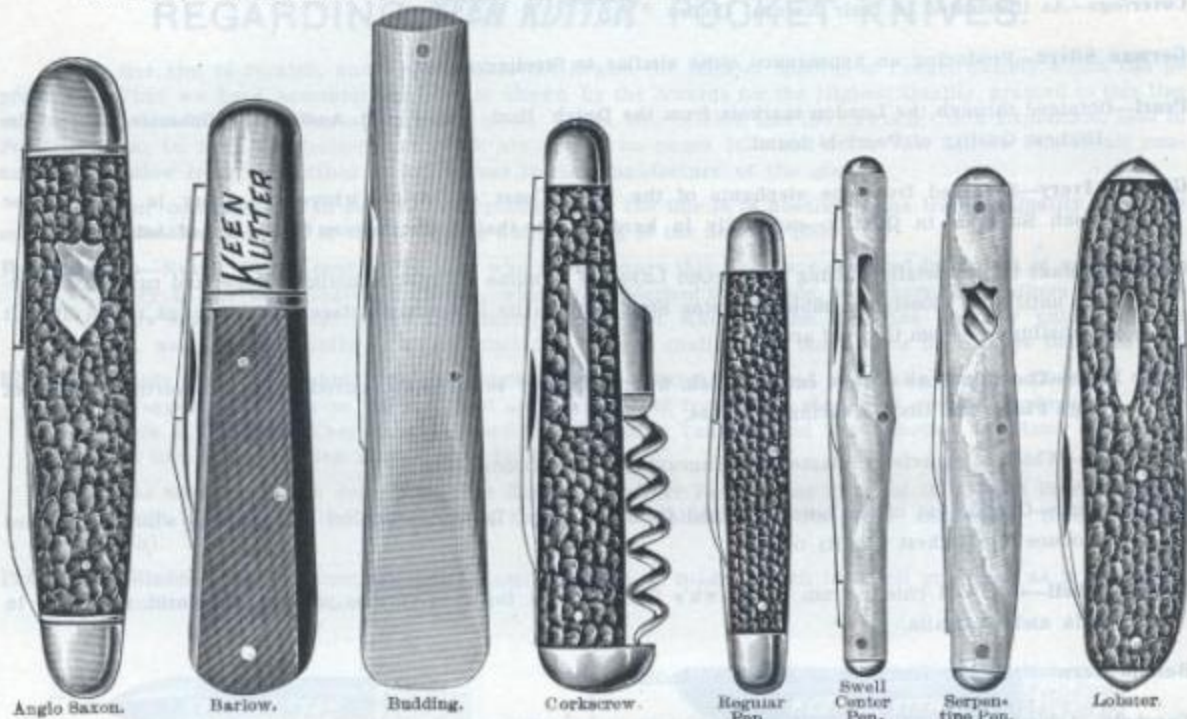
Back Springs are made of Forged Steel, Uniformly Tempered, Carefully Fitted and Full Polished, as specified in the descriptions; some of the patterns have Fancy Hand Engraved Backs.

Care of a Knife—Much trouble is caused, and many Knives prove unsatisfactory from the lack of proper care. A well made Pocket Knife is a piece of very fine mechanism, and should be kept cleaned and oiled at the joints as carefully as any other piece of fine mechanism. If this is done we are confident that every Pocket Knife bearing the **KEEN KUTTER** Brand will give the user complete and lasting satisfaction. If it does not, he is amply protected by the liberal guarantee which accompanies **KEEN KUTTER** Pocket Knives, and all other **KEEN KUTTER** goods.

WE ABSOLUTELY GUARANTEE ALL KEEN KUTTER POCKET KNIVES AGAINST DEFECTS OF TEMPER OR FLAWS.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

Information regarding **KEEN KUTTER** Pocket Knives (Continued).
Patterns of Handles—A great variety of shapes and designs of Handles are used in this line, the principal ones of which, with the names by which they are most commonly known are given below:



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TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.



Information regarding **KEEN KUTTER** Pocket Knives (Continued).

Patterns of Handles—A great variety of shapes and designs of Handles are used in this line, the principal ones of which, with the names by which they are most commonly known are given below:



Balloon



Easy Opener.



Crown Jack.



Equal End Jack.



Fish Jack.



Gun Stock Jack.



Regular Jack.



Serpentine Jack.



Sway Back Jack.



Swell Center Jack.



Swell End Jack.



Pruning.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

POCKET KNIVES

KEEN KUTTER®.

Highest Grade English Crucible Steel
Blades, Uniformly Tempered, Hand
Hammered, SHARPENED AND
WHETTED ON AN OIL
STONE, BY HAND,
READY FOR
USE.



No. K343.

Full Polished Blades; German Silver Tips and
Shield; Brass Lining; Milled Back. Per Dozen

- No. K343—3 1/4 INCH PEARL HANDLE; THREE
BLADES, 1 Large Spear Point, 1 Pen
and 1 File\$26.00
- No. K32566—3 1/4 INCH GENUINE STAG HAN-
DLE; THREE BLADES, 1 Large
Spear Point, 1 Pen and 1 File 20.00
- No. K42566—3 1/4 INCH GENUINE STAG HAN-
DLE; FOUR BLADES, 1 Large Spear
Point, 2 Pen and 1 File 21.00



No. K3113.

Full Polished Blades; German Silver Tips; Brass
Lining; Milled Back.

- No. K3113—3 INCH PEARL HANDLE; THREE
BLADES, 1 Large Spear Point, 1 Pen
and 1 File\$25.50
- No. K4408—3 INCH PEARL HANDLE; FOUR
BLADES, 1 Large Spear Point, 2 Pen
and 1 File 24.00



No. K429.

FOUR BLADES, 1 Large Sheep Foot Point, 2 Pen
and 1 File, Full Polished.

- No. K429—3 5/16 INCH PEARL HANDLE; Ger-
man Silver Bolsters and Shield; Brass
Lining; Milled Back\$24.00
- No. K4979—3 1/2 INCH PEARL HANDLE; Steel
Bolsters and Lining 24.00
- No. K4679—3 1/4 INCH PEARL HANDLE; Brass
Lining; WITHOUT BOLSTERS;
MILLED BACK 27.00



Per Dozen

- No. K4849—3 INCH PEARL HANDLE; FOUR
BLADES, 1 Large Spear Point, 2 Pen
and 1 File, Full Polished; German Silver Tips
and Shield; Brass Lining\$24.00



Per Dozen

- No. K3483—3 1/4 INCH PEARL HANDLE; THREE
BLADES, 1 Large Spear Point and 2
Pen, Half Polished; German Silver Tips and
Shield; Brass Lining; Milled Back\$24.00



No. K4299.

FOUR BLADES, 2 Large Sheep Foot Point, 1 Pen
and 1 File, Half Polished.

- No. K4299—3 INCH PEARL HANDLE; Steel
Bolsters; Brass Lining\$21.00
- No. K4297—3 INCH STAG HANDLE; Steel
Bolsters; Brass Lining 13.00
- No. K3769—3 5/16 INCH PEARL HANDLE;
THREE BLADES, 1 Large Spear Point,
1 Pen and 1 File, Full Polished; Steel
Bolsters; Brass Lining 24.00



Per Dozen

- No. K3808—2 1/2 INCH PEARL HANDLE; THREE
BLADES, 1 Large Spear Point, 1 Pen
and 1 File; Full Polished; German Silver
Shield and Lining\$24.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 1 1/2 lbs.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

-2652-

POCKET KNIVES.

KEEN KUTTER®.

Highest Grade English Crucible Steel Blades, Uniformly Tempered, Hand Hammered, SHARPENED AND WHETTED ON AN OIL STONE, BY HAND, READY FOR USE.



No. K488.

Full Polished Blades; German Silver Tips; Brass Lining; Milled Back.

No. K488—2½ INCH PEARL HANDLE; FOUR BLADES, 1 Large Spear Point, 2 Pen and 1 File \$24.00

No. K0488—2½ INCH PEARL HANDLE; TWO BLADES, 1 Large Spear Point and 1 Pen 15.00

No. K3908—2½ INCH PEARL HANDLE; THREE BLADES, 1 Large Spear Point, 1 Pen and 1 File; GERMAN SILVER SHIELD..... 24.00



No. K3489.

THREE BLADES, 1 Large Spear Point, 1 Pen and 1 File, Full Polished.

No. K3489—3½ INCH PEARL HANDLE; Hand Engraved Aluminum Bolster; German Silver Lining; Milled Back \$24.00

No. K3486—3½ INCH STAG HANDLE; German Silver Bolsters and Shield; Brass Lining 16.00

No. K3488—3½ INCH PEARL HANDLE; German Silver Bolsters and Shield; Brass Lining 21.00



Per Dozen

No. K4328—3½ INCH STAG HANDLE; FOUR BLADES, 1 Large Sheep Foot Point, 2 Pen and 1 File, Full Polished; Polished Steel Bolsters; GERMAN SILVER SHIELD ON EACH SIDE; Brass Lining \$24.00



No. K02339.

Half Polished Blades; German Silver Tips, Shield and Lining.

No. K02339—3½ INCH PEARL HANDLE; TWO BLADES, 1 Large Spear Point and 1 Pen \$21.00

No. K02337—3½ INCH STAG HANDLE; TWO BLADES, 1 Large Spear Point and 1 Pen 15.00

No. K32339—3½ INCH PEARL HANDLE; THREE BLADES, 1 Large Spear Point, 1 Pen and 1 File 24.00

No. K32337—3½ INCH STAG HANDLE; THREE BLADES, 1 Large Spear Point, 1 Pen and 1 File 16.00



No. K0382.

Full Polished Blades; German Silver Tips and Shield; Brass Lining.

No. K0382—3½ INCH PEARL HANDLE; TWO BLADES, 1 Large Spear Point and 1 Pen \$21.00

No. K0383—3½ INCH GENUINE STAG HANDLE; TWO BLADES, 1 Large Spear Point and 1 Pen 15.00

No. K38333—3½ INCH GENUINE STAG HANDLE; THREE BLADES, 1 Large Spear Point, 1 Pen and 1 File 24.00

No. K48333—3½ INCH GENUINE STAG HANDLE; FOUR BLADES, 1 Large Spear Point, 2 Pen and 1 File 24.00



Per Dozen

No. K3389—2½ INCH PEARL HANDLE; THREE BLADES, 1 Large Spear Point and 2 Pen, Full Polished; Hand Engraved Aluminum Bolsters; German Silver Lining \$21.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 1½ lbs.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

-2665-

POCKET KNIVES.

KEEN KUTTER®.

Highest Grade English Crucible Steel Blades, Uniformly Tempered, Hand Hammered, SHARPENED AND WHETTED ON AN OIL STONE, BY HAND, READY FOR USE.



No. K4429.

FOUR BLADES, 1 Large Clip, 1 Large Sheep Foot, 1 Large Spey Point and 1 Pen, Full Polished; German Silver Shield and Lining.

	Per Dozen
No. K4429—4 INCH PEARL HANDLE; German Silver Bolsters	\$32.00
No. K4429E—4 INCH PEARL HANDLE; Engraved Back; German Silver Bolsters	36.00
No. K4428S—4 INCH GENUINE STAG HANDLE; German Silver Bolsters	24.00
No. K4428—4 INCH STAG HANDLE; German Silver Bolsters	21.00
No. K4426—4 INCH BUFFALO HORN HANDLE; German Silver Bolsters	24.00
No. K4829—4 INCH PEARL HANDLE; Hand Engraved Aluminum Bolsters	37.00



Per Dozen

No. K3008—3 1/4 INCH STAG HANDLE; THREE BLADES, 1 Large Clip, 1 Large Sheep Foot Point and 1 Pen, Half Polished; German Silver Bolsters and Shield; Brass Lining; Lock Back



Per Dozen

No. K44833—3 1/4 INCH GENUINE STAG HANDLE; FOUR BLADES, 1 Large Clip, 1 Large Sheep Foot, 1 Large Spey Point, and 1 Pen, Full Polished; German Silver Bolsters and Shield; Brass Lining; Milled Back

One-half Dozen in a Cardboard Box; Weight per Dozen about 2 1/4 lbs.



No. K3219.

THREE BLADES, 1 Large Spear, 1 Large Sheep Foot Point, and 1 Pen, Half Polished; German Silver Bolsters and Shield; Brass Lining.

Per Dozen

No. K3219—3 1/4 INCH PEARL HANDLE	\$24.00
No. K3216—3 1/4 INCH EBONY HANDLE	15.00
No. K3218S—3 1/4 INCH GENUINE STAG HANDLE	16.00



Per Dozen

No. K3215A—3 1/4 INCH HAND ENGRAVED ALUMINUM HANDLE; THREE BLADES, 1 Large Spear, 1 Large Sheep Foot Point and 1 Pen, Half Polished



Per Dozen

No. K3728S—3 1/4 INCH GENUINE STAG HANDLE; THREE BLADES, 1 Large Sheep Foot, 1 Large Clip Point, and 1 Pen, Half Polished; German Silver Bolsters and Shield; Brass Lining

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

POCKET KNIVES.

KEEN KUTTER®.

Highest Grade English Crucible Steel
Blades, Uniformly Tempered, Hand
Hammered, SHARPENED AND
WHETTED ON AN OIL
STONE, BY HAND,
READY FOR
USE.



No. K3433.

THREE LARGE BLADES, 1 Clip, 1 Sheep Foot and
1 Spey Point, Half Polished; German Silver Shield.

German Silver Bolsters and Lining. Per Dozen:

No. K3433 —4 INCH STAG HANDLE.....\$17.00

No. K3433 —4 INCH GENUINE STAG HANDLE. 19.00

No. K3434 —4 INCH PEARL HANDLE 30.00

Polished Steel Bolsters; Brass Lining.

No. K3232 —4 INCH GENUINE STAG HANDLE \$18.00

German Silver Bolsters; Brass Lining.

No. K3828 —4 INCH STAG HANDLE\$16.00

No. K3825 —4 INCH BUFFALO HORN HANDLE 16.00

No. K3829 —4 INCH PEARL HANDLE 33.00

No. K3903 —4 1/2 INCH STAG HANDLE 18.00

No. K8433 —4 INCH STAG HANDLE; THREE

LARGE BLADES, 1 Clip, 1 Wharn-

cliffe, 1 Spey Point, Half Polished; German

Silver Bolsters, Shield and Lining..... 17.00



No. K3278.

THREE LARGE BLADES, 1 Spear, 1 Clip and 1
Spey Point, Half Polished; German Silver Shield.

German Silver Bolsters; Brass Lining.

No. K3278 —3 3/4 INCH STAG HANDLE\$16.00

No. K3278 —3 3/4 INCH GENUINE STAG HANDLE 18.00

No. K3276 —3 3/4 INCH BUFFALO HORN HAN-

DLE 16.00

No. K3277 —3 3/4 INCH WHITE BONE HANDLE. 16.00

Polished Steel Bolsters; Steel Lining.

No. K3375 —3 3/4 INCH GRANADILLA HANDLE..\$13.00

No. K3378 —3 3/4 INCH STAG HANDLE 13.00



No. K72085.



Showing Possi-
bilities of Leather
Punch Blade.

TWO BLADES, 1 Spear Point; 1 PATENT LEATHER PUNCH, Half Polished; German Silver Bolster and
Shield, Brass Lining.

No. K72085 —3 1/2 inch ROSEWOOD HANDLE Per Dozen \$9.00

No. K72086 —3 1/2 inch EBONY HANDLE 9.00

No. K72088 —3 1/2 inch STAG HANDLE 9.00



Per Dozen

No. K7383 —3 3/4 INCH STAG HANDLE; THREE

BLADES, 1 Large Clip, 1 Large Spey

Point and 1 PATENT LEATHER PUNCH.

Half Polished; German Silver Bolster and

Shield, Brass Lining.....\$17.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 2 1/2 lbs.



Per Dozen

No. K73878 —3 3/4 INCH STAG HANDLE; THREE

BLADES, 1 Large Spear, 1 Large Sheep

Foot Point and 1 PATENT LEATHER PUNCH.

Half Polished; German Silver Bolster and

Shield, Brass Lining.....\$16.00

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
REGISTERED.

-2673-

POCKET KNIVES.

KEEN KUTTER®.

Highest Grade English Crucible Steel Blades, Uniformly Tempered, Hand Hammered, SHARPENED AND WHETTED ON AN OIL STONE, BY HAND, READY FOR USE.



No. K1201.

TWO BLADES, 1 Large Spear Point and 1 Pen; German Silver Bolster, Cap and Shield; Brass Lining.

No. K1201—3½ INCH STAG HANDLE; Half Polished Blades \$12.00

No. K1200—3½ INCH EBONY HANDLE; Half Polished Blades 12.00

No. K22033—3½ INCH GENUINE STAG HANDLE; Half Polished Blades 13.00

No. K1203—3½ INCH PEARL HANDLE; Full Polished Blades 24.00



No. K2621.

TWO BLADES, 1 Large Spear Point and 1 Pen, Half Polished; Steel Bolster and Cap; German Silver Shield; Brass Lining.

No. K2621—3½ INCH EBONY HANDLE \$ 9.00

No. K2623—3½ INCH STAG HANDLE 9.00

No. K26233—3½ INCH GENUINE STAG HANDLE 11.00

TWO BLADES, 1 Large Clip Point and 1 Pen, Half Polished; Steel Bolster and Cap; German Silver Shield; Brass Lining.

No. K26233—3½ INCH STAG HANDLE \$9.00

TWO BLADES, 1 Large Spear Point and 1 Pen, Half Polished; German Silver Shield.

No. K25233—3½ INCH GENUINE STAG HANDLE; Steel Bolster, Cap and Lining..\$10.00

No. K21988—4 INCH GENUINE STAG HANDLE; Polished Steel Bolster and Cap; Steel Lining 12.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 2 lbs.



No. K2613.

TWO BLADES, 1 Large Spear Point and 1 Pen, Half Polished; German Silver Bolster, Cap and Shield; Brass Lining.

No. K2613—3½ INCH STAG HANDLE \$12.00

No. K2611—3½ INCH EBONY HANDLE 12.00



No. K2048.

No. K2048—3½ INCH STAG HANDLE; TWO BLADES, 1 Large Clip Point and 1 Pen, Half Polished; German Silver Bolster, Cap and Shield; Brass Lining \$12.00

No. K22733—3½ INCH STAG HANDLE, WITHOUT CAP; Otherwise same as No. K2048 11.00



No. K2063.

TWO BLADES, 1 Large Spear Point and 1 Pen, Half Polished; German Silver Bolster and Shield; Brass Lining.

No. K2063—3½ INCH STAG HANDLE \$11.00

No. K20633—3½ INCH GENUINE STAG HANDLE 12.00

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

-2679-

POCKET KNIVES.

KEEN KUTTER®.

Highest Grade English Crucible-Steel Blades, Uniformly Tempered, Hand Hammered, SHARPENED AND WHETTED ON AN OIL STONE, BY HAND, READY FOR USE.



No. K2850.

Half Polished Blades; German Silver Bolster and Shield; Brass Lining.

Two Blades, 1 Large Spear Point and 1 Pen.

No. K2850 — 3% INCH GRANADILLA HANDLE... Per Dozen \$ 8.00

No. K2851 — 3% INCH EBONY HANDLE..... 8.00

No. K2853 — 3% INCH STAG HANDLE 9.00

No. K28533 — 3% INCH GENUINE STAG HANDLE 11.00

Two Blades, 1 Large Clip Point and 1 Pen.

No. K28513 — 3% INCH EBONY HANDLE Per Dozen \$ 8.00

No. K28533 — 3% INCH STAG HANDLE 9.00

No. K2695 — 3% INCH ROSEWOOD HANDLE;
TWO BLADES, 1 Large Spear Point
and 1 Pen; Steel Bolster; Otherwise same as
No. K2850 8.00



No. K98.

EASY OPENER.

TWO BLADES, 1 Large Spear Point and 1 Pen, Half Polished; German Silver Bolster, Cap and Shield; Brass Lining.

No. K98 — 3% INCH STAG HANDLE Per Dozen \$ 8.00

No. K95 — 3% INCH COCOBOLO HANDLE 8.00

No. K93 — 3% INCH STAG HANDLE, Without
Cap 7.50

No. K90 — 3% INCH COCOBOLO HANDLE;
Without Cap 7.00

No. K2719 — 3% INCH GERMAN SILVER HANDLE;
Without Cap 8.00



No. K50.

TWO BLADES, 1 Large Spear Point and 1 Pen, Glazed Finish; German Silver Shield; Polished Steel Bolster and Cap; Brass Lining.

No. K50 — 3% INCH ROSEWOOD HANDLE Per Dozen \$ 7.00

No. K51 — 3% INCH EBONY HANDLE 7.00

TWO BLADES, 1 Large and 1 Pen, Half Polished; German Silver Shield; Polished Steel Bolster, Cap and Lining.

No. K2778 — 3% INCH STAG HANDLE; Spear
Point Large Blade Per Dozen \$ 8.00

No. K27783 — 3% INCH STAG HANDLE; Clip
Point Large Blade 8.00

TWO BLADES, 1 Large and 1 Pen, Half Polished; German Silver Shield, Bolster and Cap; Brass Lining.

Spear Point Large Blade.

No. K2780 — 3% INCH GRANADILLA HANDLE... Per Dozen \$ 8.00

No. K2781 — 3% INCH EBONY HANDLE 8.00

No. K2783 — 3% INCH STAG HANDLE 9.00

No. K20333 — 3% INCH GENUINE STAG HANDLE 10.00

No. K2030/SC — 3% INCH SILVER CELLULOID
HANDLE 10.00

Clip Point Large Blade.

No. K27803 — 3% INCH GRANADILLA HANDLE... Per Dozen \$ 8.00

No. K27813 — 3% INCH EBONY HANDLE 8.00

No. K27833 — 3% INCH STAG HANDLE 9.00



No. K26755.

TWO BLADES, 1 Large Spear Point and 1 Pen, Half Polished; German Silver Bolster, Shield and Lining.

No. K26755 — 3% INCH COCOBOLO HANDLE ... Per Dozen \$ 8.00

No. K26756 — 3% INCH EBONY HANDLE 8.00

No. K23758 — 3% INCH STAG HANDLE, Polished
Steel Bolster and Steel Lining; Other-
wise same as No. K26755 8.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 1½ lbs.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

POCKET KNIVES.

KEEN KUTTER®

Highest Grade English Crucible Steel Blades, Uniformly Tempered, Hand Hammered, -SHARPENED AND WHETTED ON AN OIL STONE, BY HAND, READY FOR USE.



No. K601.

BARLOW PATTERN.

ONE LARGE BLADE, Glazed Finished; Polished Steel Bolster; Steel Lining.

	Per Dozen
No. K601—5 INCH BROWN BONE HANDLE; Clip Point Blade	\$6.00
No. K600—5 INCH BROWN BONE HANDLE; Spear Point Blade	6.00



No. K2305.

TWO BLADES, 1 Large and 1 Pen, Glazed Finish; Polished Steel Bolster; German Silver Shield; Steel Lining.

	Per Dozen
No. K2305 —3 3/4 INCH COCOBOLO HANDLE; Spear Point Large Blade	\$4.00
No. K2305 3/4 —3 3/4 INCH COCOBOLO HANDLE; Clip Point Large Blade	4.00
No. K2306 —3 3/4 INCH EBONY HANDLE; Spear Point Large Blade	4.00
No. K2306 3/4 —3 3/4 INCH EBONY HANDLE; Clip Point Large Blade	4.00

TWO BLADES, 1 Large and 1 Pen, Glazed Finish; Polished Steel Bolster; Steel Lining.

	Per Dozen
No. K2105 —3 3/4 INCH COCOBOLO HANDLE; Spear Point Large Blade	\$4.00
No. K2105 3/4 —3 3/4 INCH COCOBOLO HANDLE; Clip Point Large Blade	4.00
No. K2106 —3 3/4 INCH EBONY HANDLE; Spear Point Large Blade	4.00
No. K2160R —3 3/4 INCH COCOBOLO HANDLE; with Long Bolster; Spear Point Large Blade	4.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 2 lbs.



No. K510.

BARLOW PATTERN.

TWO BLADES, 1 Large and 1 Pen, Glazed Finish; Polished Steel Bolster; Steel Lining.

	Per Dozen
No. K510—3 3/4 INCH BROWN BONE HANDLE; Spear Point Large Blade	\$4.50
No. K511—3 3/4 INCH BROWN BONE HANDLE; Clip Point Large Blade	4.50
No. K512—3 3/4 INCH BROWN BONE HANDLE; Spey Point Large Blade	5.00
No. K513—3 3/4 INCH BROWN BONE HANDLE; Razor Point Large Blade	4.50
No. K514—3 3/4 INCH WHITE BONE HANDLE; Spear Point Large Blade	6.00

ONE LARGE BLADE, Glazed Finish; Polished Steel Bolster; Steel Lining.

	Per Dozen
No. K500 —3 3/4 INCH BROWN BONE HANDLE; Spear Point Blade	\$3.00
No. K1883 —3 3/4 INCH BROWN BONE HANDLE; Razor Point Blade	3.00



No. K2583.

TWO BLADES, 1 Large and 1 Pen, Glazed Finish; Polished Steel Bolster; German Silver Shield; Steel Lining.

	Per Dozen
No. K2583 —3 3/4 INCH STAG HANDLE; Spear Point Large Blade	\$4.00
No. K2583 3/4 —3 3/4 INCH STAG HANDLE; Sheep Foot Point Large Blade	4.00
No. K2580 —3 3/4 INCH COCOBOLO HANDLE; Spear Point Large Blade	4.00
No. K2580 3/4 —3 3/4 INCH COCOBOLO HANDLE; Sheep Foot Point Large Blade	4.00

-2726-

PRESS BUTTON POCKET KNIVES.



First Quality English Crucible Steel Blades, Hand Hammered, Highly Tempered, SHARPENED READY FOR USE.



Per Dozen

No. 1005WG—5 INCH STAG HANDLE: One Large Clip Point Blade, Full Polished; German Silver Bolster and Folding Guard; Steel Lining..... \$17.00



No. 115PB.

Per Dozen

No. 115PB—3 3/8 INCH STAG HANDLE: Two Large Blades, 1 Clip Point and 1 Spey Point, Half Polished; Brass Lining..... \$15.00

No. 116PB—3 3/8 INCH STAG HANDLE: Two Blades, 1 Large Spey Point and 1 Pen, Half Polished; Brass Lining..... 15.00



Showing Possibilities of Leather Punch Blade.

No. 117PB—3 3/8 INCH STAG HANDLE: Two Blades, 1 Large Clip Point and 1 PATENT LEATHER PUNCH BLADE, Half Polished; Brass Lining..... \$15.00



No. 1000PB.

ONE LARGE BLADE, Full Polished; German Silver Bolster; Steel Lining.

Per Dozen

No. 1000PB—5 INCH STAG HANDLE; Clip Point Blade..... \$14.00

No. 1100PB—5 INCH STAG HANDLE; Spey Point Blade..... 14.00

No. 1007PB—5 INCH EBONY HANDLE; Clip Point Blade..... 14.00

No. 1200PB—5 INCH STAG HANDLE; Clip Point Saber Pattern Blade..... 15.00



No. 500PB.

ONE LARGE BLADE, Full Polished; German Silver Bolster; Steel Lining.

Per Dozen

No. 500PB—4 INCH STAG HANDLE; Spey Point Blade..... \$12.00

No. 501PB—4 INCH STAG HANDLE; Clip Point Blade..... 12.00

No. 507PB—4 INCH EBONY HANDLE; Spey Point Blade..... 12.00

No. 517PB—4 INCH EBONY HANDLE; Clip Point Blade..... 12.00



No. 105PB.

TWO BLADES, 1 Large Spey Point and 1 Pen, Full Polished; Brass Lining.

Per Dozen

No. 105PB—3 3/8 INCH PEARL HANDLE..... \$30.00

No. 100PB—3 3/8 INCH STAG HANDLE..... 12.00

No. 102PB—3 3/8 INCH IMITATION SHELL HANDLE..... 15.00

No. 103PB—3 3/8 INCH WHITE CELLULOID HANDLE..... 15.00

No. 107PB—3 3/8 INCH BLACK CELLULOID HANDLE..... 15.00

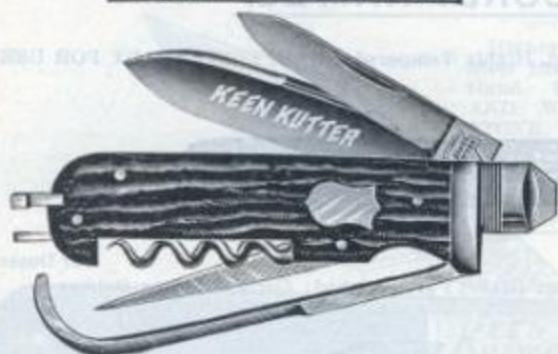
One-half Dozen in a Cardboard Box; Weight per Dozen about 2 lbs.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

-2728-



POCKET KNIVES.



KEEN KUTTER®.

Combination Knife; Highest Grade English Crucible Steel Blades, Uniformly Tempered, Hand Hammered, Full Polished, SHARPENED READY FOR USE; TWO BLADES, 1 Large Spear Point and 1 Pen; One Each, Polished Steel Combination Hoof Cleaner and Nut Cracker, Cork Screw, Screw Driver, Tweezers, Pipe Cleaner, Gouge and Tempered Steel Fleam.

No. K830—KEEN KUTTER®; 4 INCH GENUINE STAG HANDLE; Polished Steel Bolster; German Silver Shield; Steel Lining\$24.00



Combination Knife; First Quality English Crucible Steel Blade, Highly Tempered, Half Polished; 1 Large Spear Point Blade, and 1 Each Polished Steel Gouge, Hoof Cleaner, Screw Driver and Combination Pliers and Wire Cutter.

No. 3H—STAG HANDLE; Length Over All $4\frac{1}{2}$ inches; German Silver Bolsters; Brass Lining\$21.00

One-half Dozen in a Cardboard Box; Weight per Dozen about $1\frac{1}{2}$ lbs.

VETERINARY FLEAMS.

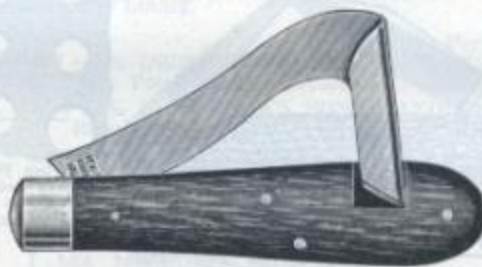


No. 829.

First Quality English Crucible Steel Blades, Highly Tempered, Glazed Finish.

No. 829—3 INCH BRASS HANDLE, with THREE BLADES\$7.00
No. 828—3 INCH BRASS HANDLE, with TWO BLADES 5.00

RASE KNIVES.



LUMBERMAN'S.

No. 135R—3½ INCH COCOBOLO HANDLE; First Quality Crucible Steel Blade, Highly Tempered, Glazed Finish; Polished Steel Bolster; Steel Lining\$12.00

One-half Dozen in a Cardboard Box; Weight per Dozen about $1\frac{1}{2}$ lbs.

BUDDING KNIVES.



No. 3—3½ INCH COCOBOLO HANDLE, 2½ inch Extra Grade Crucible Steel Blade, Glazed Finish, with Tang extending half way into the Handle, secured by Two Brass Pins\$4.00

One Dozen in a Cardboard Box; Weight per Dozen about $1\frac{1}{2}$ lbs.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

-2758 B-

SAFETY RAZORS.

KEEN KUTTER®



Showing Separate Parts of Razor.
(Cut Actual Size.)



Showing method of packing Blades.
(Cut Actual Size.)



Showing Razor ready for Use.
(Cut Actual Size.)



Showing Razor and Blades in Case.
(Cut 2/3 Actual Size.)

- No. K1—KEEN KUTTER®: TRIPLE SILVER PLATED FRAME AND HANDLE, 4 inches Long, with Knurled Center; Twelve Blades, made of Highest Grade Norwegian Cutlery Steel, Highly Tempered, Carefully Ground, Stropped by Hand, and Tested (Six Blades in Oil Paper Booklets, in Sealed Envelopes); EACH BLADE WILL GIVE FROM SIX TO TWENTY SHAVES; Black Morocco Leather Case, Bottom Silk Plush Covered, Size 4¼x2x1½ inches; Weight each about 4½ ozs. \$60.00
- No. K2—KEEN KUTTER®: GOLD PLATED FRAME AND HANDLE, with Triple Silver Plated Knurled Center; Genuine Pigskin Case, with Skiver Leather Lining, and Two Removable Cases for Holding Blades, Marked USED and UNUSED in Gold Letters; Otherwise same as No. K1 90.00
- No. KIB—Extra Blades Only for KEEN KUTTER Safety Razor; Packed Five in Oil Paper Booklets, in Sealed Envelopes \$0.75

20 Packages (100 Blades) in a Cardboard Box.

-2758C-

TRADE MARK:
B. C. SIMMONS' KEEN KUTTER,
REGISTERED.

SAFETY RAZORS.

KEEN KUTTER® TRAVELING SETS.



Gold and Silver
Plated.

Highest Grade
Norwegian Steel
Blades, Stropped
and Tested by
hand. Genuine
Badger Hair
Brush and Best
Soap.

No Stropping.
No Honing.

No. K4—KEEN KUTTER® Traveling Set; Genuine Pigskin Case, with Smooth Leather Lining Throughout; Rich Tan Color; Size of Case 5x4½x1½ inches.....	Per Set \$18.00
No. K2—KEEN KUTTER® Traveling Set; Magellan Lizard (Black Pebbled) Morocco Case; Black Smooth Leather Lining Throughout; Fittings same as No. K4, except TRIPLE SILVER PLATED INSTEAD OF GOLD	10.00

CONTENTS OF No. K4 SET.

- 1 KEEN KUTTER® Safety Razor; GOLD PLATED-FRAME AND HANDLE, 4 inches Long, with Knurled Center.
- 12 KEEN KUTTER® Blades, made of Highest Grade Norwegian Cutlery Steel, Highly Tempered, Carefully Ground, Stropped by Hand and Tested (SIX Blades in an Oiled Paper Booklet, Each Booklet in Sealed Envelope.) EACH BLADE WILL GIVE FROM SIX TO TWENTY SHAVES.
- 2 Smooth Leather Covered Removable Cases for Holding Blades, marked "Used" and "Unused" in Gold Letters.
- 1 GOLD PLATED Case, with Removable Bottom, Length 3¼ inches; Diameter 1¼ inches; Contains Large Size Stick of Williams' Shaving Soap.
- 1 GOLD PLATED Case, with Removable Bottom; Length 3¼ inches; Diameter 1¼ inches; Contains a First Quality Genuine Badger's Hair Shaving Brush, with White Bone Tipped Horn Handle.

One Set in a Cardboard Box; Weight per Set about 1 lb.

TRADE MARK:
"ENDERS' DOLLAR,"
REGISTERED.

-2759-

SAFETY RAZORS.

ENDERS' DOLLAR®.



Showing Separate Parts of Razor.



Showing Razor Ready for Use.



Showing Method of Sealing Blades.



Showing Method of Packing Blades.



Showing Razor and Blades in Case.

ENDERS' DOLLAR®: Solid Nickel Silver Frame; Steel Handle, Heavily Nickel Plated, Length 4 inches, with Knurled Center and Seven Blades, made of Highest Grade Norwegian Cutlery Steel, Carefully Ground and Highly Tempered; EACH BLADE WILL GIVE FROM SIX TO TWENTY SHAVES. Put up One Razor and Seven Blades in a Hinged Case, Covered with Black Karatol, Purple Silk Plush Lined, with Button Clasp; Size of Case 4 1/2 inches Long, 2 inches Wide and 3/4 inch High; Weight per dozen about 2 lbs.

One Dozen in a Cardboard Box. \$12.00

Extra Blades Only for Enders' Dollar® Safety Razor, FIVE in a sealed package. Per Package of Five \$0.50

20 Packages (100 Blades) in a Cardboard Box; Weight per Box of 100 Blades about 8 ozs.

— 2760 —

SAFETY RAZORS. **ENDERS' TRAVELING SETS.**



No Honing.
No Stropping.

Just Lather
and Shave.

No. 82—ENDERS' Traveling Set; Morocco Case, with Leather Flaps, and Purple Silk Plush Lining; Size of Case 5x2½x1½ inches; Weight per set about 12 ozs. Per Dozen Sets \$60.00
One-half Dozen Sets in a Carton.

CONTAINS.

- 1 Enders' Safety Razor; Solid Nickel Silver Frame, Steel Handle Heavily Nickel Plated, 4 inches Long, with Knurled Center.
- 12 (Two Packages) Wafer Pattern Blades, made of the Highest Grade Norwegian Cutlery Steel, Carefully Ground and Highly Tempered; Each Blade will Give from Six to Twenty Shaves.
- 1 Stick Colgate's Shaving Soap, in Nickel Plated Case.
- 1 Nickel Plated Collapsible Finest Badger Hair Shaving Brush.



Size of Case 5x2½x1½ inches.

Cuts Full Size.



SCISSORS AND SHEARS.

KEEN KUTTER® Scissors are Hand Hammered from a Solid Bar of Highest Grade Crucible Cutlery Steel, Thoroughly Hardened and Tempered. They are renowned for their Perfection in every particular. The Greatest Possible Care is given to each process of their manufacture. As an illustration, each Screw is Hand Made for the particular Pair of Scissors to which it belongs. Special Attention is paid to the fitting of the Scissors—as a result of which we Guarantee Every Pair to cut perfectly at the Extreme Points of the Blades—a particular in which many so-called first-class Scissors are deficient.

We carry a complete stock of all Shapes and Sizes, including Embroidery, Ladies', Pocket, Nail, Manicure, Buttonhole and Barbers'.

The **KEEN KUTTER®** Shears are "Steel Laid" Shears, manufactured by welding a Bar of Highest Grade Crucible Cast Steel to a Malleable Iron Base, moulded in the Rough Shape of a Shear Blade. This combination produces a Shear much less liable to break than the solid Steel Shear, and yet with fully as High Cutting Qualities which will be retained as long as any part of the blade remains. These Shears are fitted also with the Strauss Patent Bolt and Nut, the Bolt having two threads, one for the Blade of the Shear being cut in one direction, and one for the Nut in the other direction. This combination Absolutely Prevents the Nut working loose on the blade of the Shear, a tendency very common and very annoying on other brands. The greatest care is taken to see that the Blades are correctly fitted so that each pair will cut satisfactorily to the Extreme Points of the Blades.

The line includes both full Nickel Plated and Japanned Bows, both Straight and Bent Patterns of ordinary Trimmers, Bankers', Barbers' and Tailors' Shears.

-2730-



17 Years--And Just See What They Were Used For.

St. Louis, Mo., March 3rd, 1903.

Simmons Hardware Co.,

St. Louis, Mo.,

Gentlemen:--

In Nov. 1886, I bought of Freeman Evans Hdw Co., of Marshfield, Mo., a pair of Keen Kutter Scissors. For several years they were used as they generally are, when I considered them old and about worthless and allowed the men at the Ranch to use them for various purposes, such as trimming Horses' Manes, Tails and Fetlocks, and lastly shearing cattle for finding brands. After a few years of this use they were sharpened and I used them four years at Dressmaking, when I returned them to Simmons Hdw. Co., for new ones on Feb. 26th, 1903.

Mrs. L. C. Gurney.

4233 McRee Ave.



Used 13 Years--Sharpened 3 Times.

T. S. HEATH & SON.

Dealers in

Everything for Cash.

Weaubleau, Mo., 9/21/03.

Simmons Hardware Co.,

St. Louis, Mo.,

Gentlemen:--

In reply to yours of the 18th inst., I will say that I used the little K. K. Shears for thirteen years, and do not think that they were sharpened more than two or three times. I never in my experience of thirty-one years in the retail business had a pair of scissors that were in an any manner to be compared with them, as they always cut as fine as a Razor. I have always used the K. K. goods, and found them a very superior line, but these little shears were par Excellence in every respect.

Yours truly,

Thos. S. Heath.

TRADE MARK:
H. C. SIMMONS' KEEN KUTTER,
REGISTERED.

-2731-
SCISSORS.
KEEN KUTTER®.

Highest Grade Solid Crucible Steel Blades, Uniformly Tempered, Carefully Ground and Set; Fitted Bows; Full Crocus Polished; Plain Screws.



Blades are
Correctly
Fitted so that
Each Pair
Will Cut
Satisfactorily
to the
Extreme Point
of the
Blades.

LADIES' OR REGULAR.

No. KS—KEEN KUTTER®.

Length, inches	3½	4	4½	5	5½	6	6½	7	8
Weight per dozen about, lbs.	½	¾	¾	1	1¼	1½	1¾	2	3
Per dozen	\$6.00	6.75	7.50	8.25	9.00	10.50	12.00	13.50	15.75

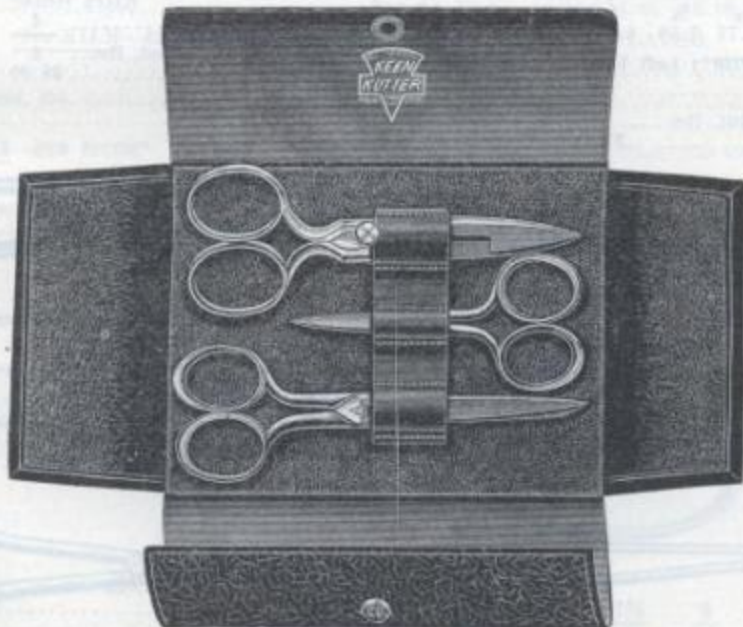


EMBROIDERY OR LACE.

No. K7—KEEN KUTTER®.

Length, inches	3	3½	4	4½	5½	6½
Weight per dozen about, lbs.	½	½	¾	¾	1½	1¾
Per dozen	\$6.00	6.50	7.00	7.50	9.00	12.00

One-half-Dozen in a Cardboard Box.



KEEN KUTTER®.

Per Case

No. K30—Genuine Seal Grain Folding Leather Case, Green Plush Lined; Size, Closed, 5½x4½ inches..... \$4.00

CONTAINS:

- 1 Pair **KEEN KUTTER** Ladies' Scissors, 5 inches.
- 1 Pair **KEEN KUTTER** Embroidery Scissors, 3½ inches.
- 1 Pair **KEEN KUTTER** Button Hole Scissors No. 1, 4¾ inches.

Packed Loose; Weight Each about ¼ lb.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER.
REGISTERED.

-2732-
SCISSORS.

KEEN KUTTER®.

Highest Grade Solid Crucible Steel Blades, Uniformly Tempered, Carefully Ground and Set, Full Crocus Polished; Plain Screws.



BUTTON HOLE.

KEEN KUTTER®; Round Bows; Brass Set Screw.

No.	K1BH
Length, inches	4 1/4
Weight per dozen about, lbs.....	1 1/2
Per dozen	\$9.00



BUTTON HOLE.

KEEN KUTTER®; Shear Bows; Brass Set Screw.

No.	K2BH
Length, inches	5 1/2
Weight per dozen about, lbs.....	1 1/2
Per dozen	\$10.50



POCKET.

No. K6P—KEEN KUTTER®;

Fitted Bows.

Length, inches....	3	3 1/2	4	4 1/2	5	6
Wgt. dozen, lbs...	1/2	3/4	1	1 1/4	1 1/2	1 3/4
Per dozen	\$6.75	7.50	8.25	9.00	10.50	12.00

No. K66P—KEEN KUTTER®; Left Hand; Fitted Bows.

Length, inches	4	4 1/2	5
Weight per dozen about, lbs....	1	1 1/4	1 1/2
Per dozen	\$16.00	18.00	20.00

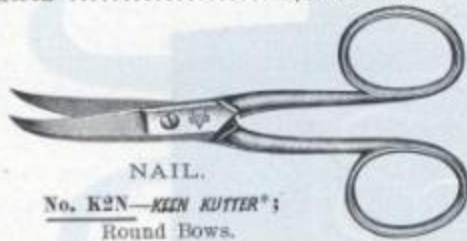


POCKET.

No. K389P—KEEN KUTTER®; Fitted Bows; Bevel Blades;

Extra Heavy.

Length, inches	4	4 1/2	5	5 1/2
Wgt. per dozen about, lbs...	1	1 1/4	1 1/2	1 3/4
Per dozen	\$8.00	10.00	11.00	12.00



NAIL.

No. K2N—KEEN KUTTER®;

Round Bows.

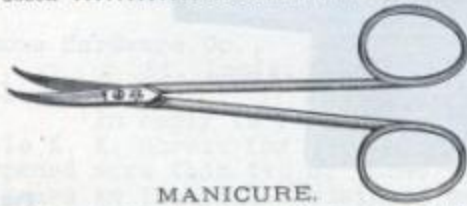
Length, inches	2 3/4	3 1/2
Weight per dozen about, lbs.....	1/2	3/4
Per dozen	\$11.25	11.25



NAIL.

**KEEN KUTTER®; Round Bows;
Extra Heavy.**

No.	K3N
Length, inches	4
Weight per dozen about, lbs.....	1
Per dozen	\$12.00



MANICURE.

No. K1M—KEEN KUTTER®; Round Bows; Straight Shank.

Length, inches	3	3 1/2	4 1/4
Weight per dozen about, lbs.....	3/4	1 1/2	1 3/4
Per dozen	\$11.25	11.25	11.25



MANICURE.

KEEN KUTTER®; Round Bows.

No.	K4M
Length, inches	4 1/4
Weight per dozen about, lbs.....	1 1/2
Per dozen	\$15.00

One-half Dozen in a Cardboard Box.

-2742-

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

SHEARS.**KEEN KUTTER®.**

Highest Grade Crucible Steel Laid Blades, Uniformly Tempered, Carefully Ground and Set; Fitted Bows; Patent Screw and Nut.



U. S. Patent No. 226,128 Screw and Nut.

This Patent Screw and Nut is used exclusively on KEEN KUTTER Shears. It consists of a Right and Left Hand Screw, and a Left Hand Nut. The Main Screw holds the Blades Together; the Left Hand Threaded End of the Screw extending through the Shears, with Left Hand Nut Attachment, makes it IMPOSSIBLE FOR THE BLADES TO WORK LOOSE.

The Whole
Construction
of the
Shear
is made by
the most
Careful
Workmen
and under
the most
Rigid
Inspection.

**STRAIGHT TRIMMERS.****No. K1—KEEN KUTTER®; FULL NICKEL PLATED.**

Length, inches	6	6½	7	7½	8	8½	9	10
Weight per dozen about, lbs.	1¾	2	2½	3	3½	4	4½	6
Per dozen	\$12.00	13.00	14.00	15.00	16.00	17.00	19.00	25.00

No. K1LH—KEEN KUTTER®; LEFT HAND; FULL NICKEL PLATED.

Length, inches	7½	8½
Weight per dozen about, lbs.	3	4
Per dozen	\$19.00	21.00

No. K3—KEEN KUTTER®; BLACK JAPANNED HANDLES; NICKEL PLATED BLADES.

Length, inches	6	6½	7	7½	8	8½	9	10
Weight per dozen about, lbs.	1¾	2	2½	3	3½	4	4½	6
Per dozen	\$12.00	13.00	14.00	15.00	16.00	17.00	19.00	25.00

**BENT TRIMMERS.****No. K2—KEEN KUTTER®; FULL NICKEL PLATED.**

Length, inches	6	6½	7	7½	8	8½	9	10
Weight per dozen about, lbs.	1¾	2	2½	3	3½	4	4½	6
Per dozen	\$13.00	14.00	15.00	16.00	17.00	20.00	22.00	27.00

No. K4—KEEN KUTTER®; BLACK JAPANNED HANDLES; NICKEL PLATED BLADES.

Length, inches	6	6½	7	7½	8	8½	9	10	12	13	14
Weight per dozen about, lbs.	1¾	2	2½	3	3½	4	4½	6	7	8	8½
Per dozen	\$13.00	14.00	15.00	16.00	17.00	20.00	22.00	27.00	33.00	36.00	51.00

One-half Dozen in a Cardboard Box.

TRADE MARK:
E. C. HIMMONS' KEEN KUTTER;
CHIPAWAY.
REGISTERED.

SHEARS.

BARBERS'.



Highest Grade Solid Crucible Steel Blades, Uniformly Tempered, Carefully Ground and Set; Fitted Bows; Full Nickel Plated; Patent Screw and Nut.

No. K25—KEEN KUTTER*.

Length, inches	7 1/2	8
Weight per dozen about, lbs.	2	2 1/4
Per dozen	\$13.50	15.00



Highest Grade Crucible Steel Laid Blades, Uniformly Tempered, Carefully Ground and Set; Fitted Bows; Patent Screw and Nut.

No. K17—KEEN KUTTER*; FULL NICKEL PLATED.

Length, inches	7	7 1/2	8	8 1/2
Weight per dozen about, lbs.	2	2 1/4	2 1/2	2 3/4
Per dozen	\$15.00	15.00	16.00	17.00

No. K18—KEEN KUTTER*; BLACK JAPANNED HANDLES; Nickel Plated Blades.

Length, inches	7	7 1/2	8	8 1/2
Weight per dozen about, lbs.	2	2 1/4	2 1/2	2 3/4
Per dozen	\$15.00	15.00	16.00	17.00

KEEN KUTTER*; LEFT HAND; FULL NICKEL PLATED.

No.	K19LH
Length, inches	8 1/2
Weight per dozen about, lbs.	2 1/2
Per dozen	\$22.00

PAPER OR BANKERS'.



Highest Grade Solid Crucible Steel Blades, Uniformly Tempered, Carefully Ground and Set, Full Crocus Polished; Gold Plated Fancy Fitted Bows; Patent Screw and Nut.

No. K204—KEEN KUTTER*.

Length, inches	8	9
Weight per dozen about, lbs.	2 1/4	2 3/4
Per dozen	\$15.00	16.00

One-half Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

SHEARS.

PAPER OR BANKERS'.



Highest Grade Crucible Steel Laid Blades, Uniformly Tempered, Carefully Ground and Set; Fitted Bows; Patent Screw and Nut.

No. K15—KEEN KUTTER*; FULL NICKEL PLATED.

Length, inches	12	14	16
Weight per dozen about, lbs.	7	8½	11
Per dozen	\$32.00	42.00	54.00

No. K16—KEEN KUTTER*; BLACK JAPANNED HANDLES;
Nickel Plated Blades.

Length, inches	12	14	16
Weight per dozen about, lbs.	7	8½	11
Per dozen	\$32.00	42.00	54.00

TAILORS' SHEARS.



KEEN KUTTER*.

Highest Grade Crucible Steel Laid Blades, Uniformly Tempered, Carefully Ground and Set, Glazed Finish; Brass Bolt and Nut.

Black Japanned Handles.

Nos.	K3	K3½	K4	K4½	K5	K6	K7	K8	K9	K10	K12
Length, inches	12	12½	13	13½	14	14½	15	15½	16	16½	17
Weight per pair about, lbs.	1½	1¾	2	2½	3	3½	4	4½	5	5½	6
Per pair	\$3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50

Full Nickel Plated Handles and Blades.

Nos.	K3T	K3½T
Length, inches	12	13
Weight per pair about, lbs.	1½	2
Per pair	\$5.00	5.50

One Pair in a Cardboard Box.

COGGED SHEARS.



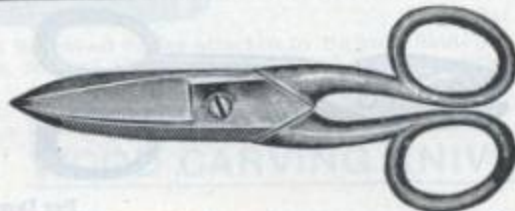
Solid Crucible Tempered Steel Blades; Black Japanned Handles; Solid Steel Bolt; Cutting Blade Carefully Ground and Sharpened; Lower Blade has Cogged Edge which Absolutely Prevents the material from slipping while cutting. Adapted for Cutting Rope, Belting, Linoleum, Rubber, Rubber Hose, Wire Cloth, etc.

Per Dozen

No. 23—Length 8½ inches	\$20.00
No. 24—Length 10½ inches	25.00

One-half Dozen in a Package; Weight per Dozen about 4½ lbs.

ELECTRICIANS' SCISSORS.



Per Dozen

No. 551—Electricians' Scissors; First Quality Solid Crucible Steel; Blades Highly Tempered, with File on Back of Each Blade; Full Nickel Plated; Length over all 5 inches. \$8.00

One-half Dozen in a Cardboard Box; Weight per Dozen about 4 lbs.

TRADE MARKS:
E. C. SIMMONS' **KEEN KUTTER**;
REGISTERED.

TINNERS' TOOLS.

TINNERS' SNIPS.

For Quality, Finish and General Utility They Are Not to be Equaled.



Two Snips in One Very Useful in the Work Shop.

KEEN KUTTER*.

BUFFALO PATTERN; Combination Circular and Straight; Jaws Ground and Shaped in such a manner that they can be used readily for Cutting Curves and Irregular Shapes as well as for Straight Work, thus combining all the advantages of both the Circular and Straight Snips in One Tool; Black Japanned Drop Forged Handles; Highest Grade Crucible Steel Laid Blades.

Nos.	6½	7	8	9	10	11	12
Length of Cut, inches.....	4½	4	3½	3	2½	2¼	2½
Length over all, inches.....	15	13¾	13¼	12¾	11¾	9	8½
For Cutting Iron, Nos.....	24	25	26	27	28	28	30
Weight each about, lbs.....	3	3	2½	2	1	¾	¾
Each	\$3.50	3.00	2.50	2.00	1.90	1.70	1.55

Nos. 6½ to 10, One in a Box. Nos. 11 and 12, One-half Dozen in a Box.

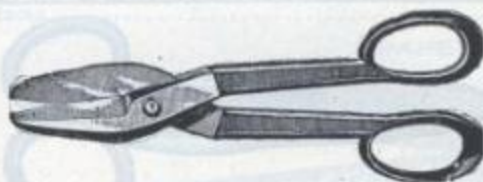


P. S. & W., CIRCULAR.

Steel Laid Blades and Black Japanned Drop Forged Handles.

Nos.	7C	8C	9C	10C
Length of Cut, inches.....	4	3½	3	2½
Length over all, inches.....	13¾	13¼	12	10¾
For Cutting Iron, Nos.....	25	26	27	28
Weight each about, lbs.....	2½	2	1½	1
Each	\$3.50	3.00	2.50	2.25

Packed Loose.



DENTAL SNIPS.



No. 97—Solid Cast Iron; Case Hardened Bright Blades; Black Japanned Handles; Length of Cut 3 inches; Length over all 12 inches; Adapted for 28 Gauge Iron; Weight per dozen about 15 lbs. \$9.00

One Dozen in a Cardboard Box.

For Cutting Screen Wire Cloth, Light Bench Work and General Use on Store Counter.

KEEN KUTTER*

No. 11D—Solid Cast Steel; Nickel Plated Blades; Black Japanned Handles; Length of Cut 1½ inches; Length over all 7½ inches; Weight per dozen about 4 lbs. \$15.00
One-half Dozen in a Cardboard Box.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER,
REGISTERED.

FARRIERS' KNIVES.



KEEN KUTTER*

Per Dozen

No. K10—Solid Bone Handle; Highest Grade Crucible Steel Blade $\frac{5}{8}$ inch Wide, Uniformly Tempered, Highly Polished. CAREFULLY GROUND AND SHARPENED, READY FOR USE..... \$5.50
One-half Dozen in a Cardboard Box; Weight per Dozen about 3 lbs.

SPATULAS.



KEEN KUTTER*

No. K9803—Scale Tang Cocobolo Handle; Polished Steel Bolster; Highest Grade Crucible Steel Blade, Glazed Finish.

Length of Blade, inches.....	3	4	5	6
Width of Blade, inches.....	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{8}$
Weight per dozen about, lbs.	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
Per dozen	\$4.00	4.50	5.50	6.50
Length of Blade, inches.....	8	10	12	14
Width of Blade, inches.....	$1\frac{1}{8}$	$1\frac{1}{2}$	2	$2\frac{1}{4}$
Weight per dozen about, lbs.	3	$4\frac{1}{2}$	6	7
Per dozen	\$10.00	16.00	27.00	36.00

One Dozen in a Cardboard Box.

CHIP CARVING KNIFE.



KEEN KUTTER*

Per Dozen

No. K16—Solid Cocobolo Handle; Length of Handle $3\frac{1}{2}$ inches, with Blade Inserted and fastened by 3 pins; Highest Grade Crucible Steel Blade, $1\frac{1}{4}$ inches Long, Highly Tempered, Glazed Finish..... \$6.00
One Dozen in a Package.

SLOYD KNIVES.



KEEN KUTTER*

For Manual Training School and Carpenters' Use.

Per Dozen

No. K15—Stained Solid Beechwood Handle; Brass Ferrule; Highest Grade Crucible Steel Blade, Saber Pattern, $2\frac{1}{2}$ inches Long, with Tang Riveted at end of Handle..... \$4.50
One Dozen in a Package; Weight per dozen about 1 lb.



For Manual Training School and Carpenters' Use.

Stained Solid Beechwood Handle; Brass Ferrule; First Quality Swedish Steel Blade, Saber Pattern, with Tang Riveted at End of Handle.

Nos.	8A	10A
Length of Blade, inches.....	$3\frac{1}{2}$	$2\frac{1}{2}$
Weight per dozen about, lbs.....	$1\frac{1}{4}$	1
Per dozen	\$3.50	2.50

One Dozen in a Package.

PATTERN MAKERS' KNIVES.



Per Dozen

No. 1—Bolster and Lining of Handle One Piece Brass, with Rosewood Scales attached by Screws; Blade Detachable, Highest Grade Crucible Steel, 7 inches Long, Natural Finish; Complete with One Detachable Blade; Weight per dozen about 3 lbs..... \$17.00
Extra Blades for No. 1—7 inches Long, $\frac{1}{2}$ inch Wide; Weight per dozen about $\frac{3}{4}$ lb..... 3.50
One Dozen in a Package.

WOOD OR LEATHER WORKERS' KNIVES.



Per Dozen

No. 3—Stained Solid Wood Handle; First Quality Steel Blade, $3\frac{1}{4}$ inches Long; Glazed Finish; Brass Ferrule; Length over all $7\frac{1}{2}$ inches; Weight per dozen about 1 lb..... \$3.00
One Dozen in a Cardboard Box.

WOOD CARVING KNIVES.



Per Dozen

No. 2—Solid Stained Wood Handle; First Quality Steel Blade, $1\frac{1}{4}$ inches Long; Glazed Finish; Brass Ferrule; Length over all $5\frac{1}{2}$ inches; Weight per dozen about 1 lb..... \$3.00

TRADE MARKS:
E. C. SIMMONS' KEEN KUTTER
AND TRIPLEX
REGISTERED.

PUTTY KNIVES.



KEEN KUTTER*

Scale Tang Rosewood Handle; Polished Brass Bolster; Two Brass Saw Rivets; Highest Grade Crucible Steel Blade $3\frac{1}{2}$ inches Long, $1\frac{1}{2}$ inches Wide, Glazed Finish; Length over all $7\frac{1}{2}$ inches.

No. K111—STIFF BLADE.....\$ 4.50
No. K112—ELASTIC BLADE..... 4.50



KEEN KUTTER*

Scale Tang Cocobolo Handle; Polished Steel Lap Bolsters, Two Brass Rivets; Highest Grade Crucible Steel Blade $3\frac{3}{4}$ inches Long, 2 inches Wide, Glazed Finish.

No. K106—STIFF BLADE.....\$ 6.00
No. K107—ELASTIC BLADE..... 6.00



KEEN KUTTER*

Solid Cocobolo Handle; Polished Brass Ferrule; Highest Grade Crucible Steel Blade 3 inches Long, $1\frac{1}{2}$ inches Wide, Glazed Finish.

No. K104—STIFF BLADE.....\$ 5.00
No. K105—ELASTIC BLADE 5.00

TWEEZERS.



No. A—4 inches Long; Steel, Nickel Plated. Per Dozen \$3.00



No. B—4½ inches Long; Steel, Nickel Plated.... Per Dozen \$3.00



No. C—3½ inches Long; Steel, Nickel Plated.... Per Dozen \$4.50



Skeleton—4½ inches Long; Steel, Nickel Plated.. Per Dozen \$4.25



Surgeons'—Steel, Nickel Plated; File Back.
Length, inches 4
Per dozen \$6.00



Swiss—Polished Steel.
Length, inches 3 4 5 6
Per dozen \$1.35 1.35 2.00 3.00
One Dozen in a Package; Weight per Dozen about ½ lb.

LUBRICATING OILS.

TRIPLEX*.

The most thoroughly satisfactory light Lubricating Oil on the Market. Used more sparingly, it does the work better, and goes farther than any other.

For LUBRICATING all light Mechanical Devices, Bicycles, Clocks, Phonographs, Typewriters, Sewing Machines, Cameras, Cutlery and all Dental, Surgical, Mathematical, Astronomical, Surveying or other delicate instruments; for sharpening and holding the edge on Razors and other instruments.

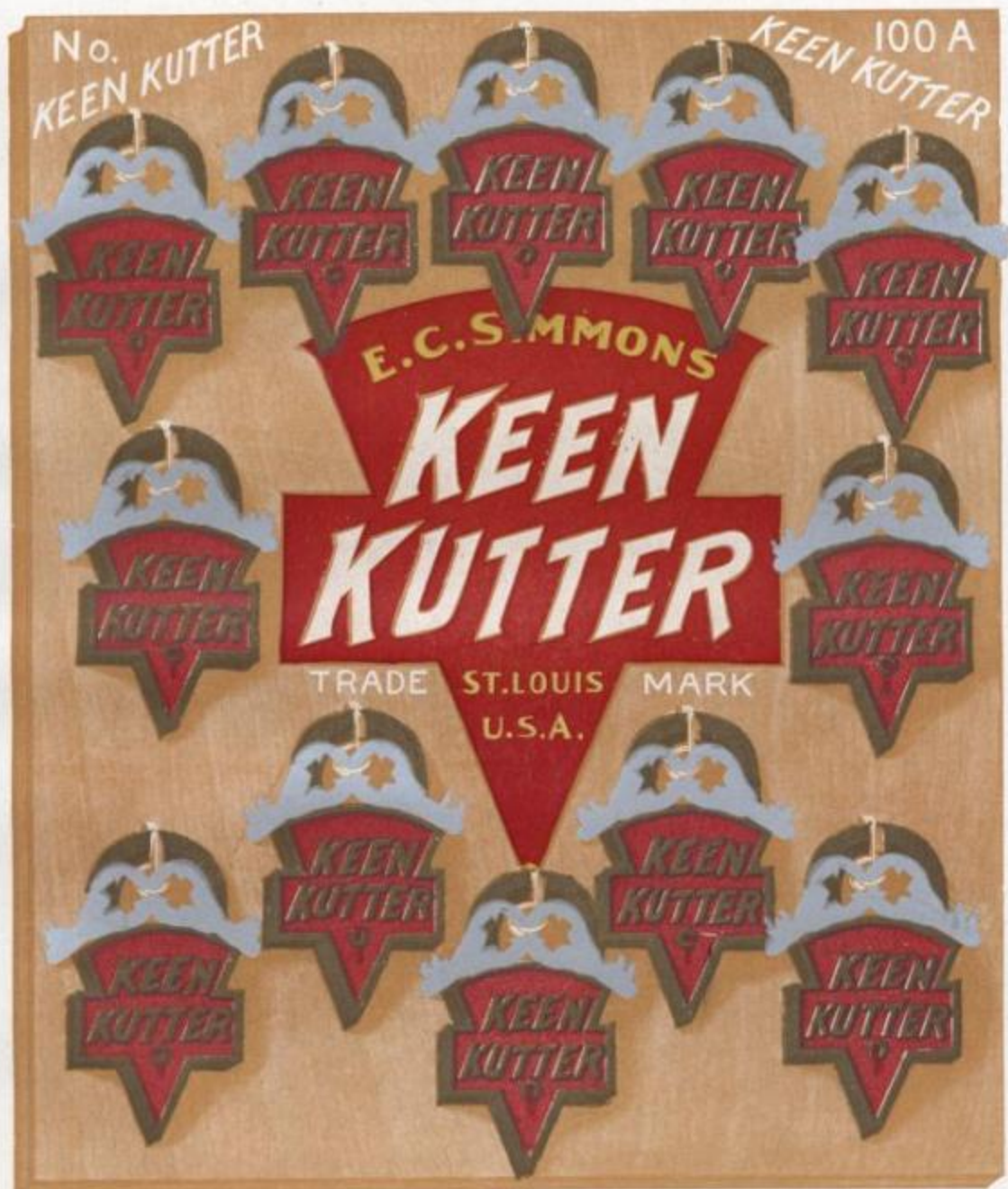
Guaranteed to be entirely free from Acids, and Non-corrosive; is Odorless, Light, Clean and effective; WILL NOT SOIL THE HANDS OR CLOTHING OR

COLLECT DUST; Cannot Thicken, Gum or Become Rancid anywhere. Each Bottle in a Separate Carton.

No. 114—1 OZ. BOTTLES; Weight per dozen about 3¼ lbs.....\$1.20
No. 115—3 OZ. BOTTLES; Weight per dozen about 6¼ lbs..... 3.00
No. 114, Two Dozen; No. 115, One Dozen in a Wooden Box with a Collapsible Cardboard Show Case Display Box in Each.



- 1120A -

PADLOCKS.

No. 100A—ASSORTMENT: Consists of One Dozen KEEN KUTTER Padlocks Mounted on Heavy Cardboard
 Display Stand, 13x16 inches..... Per Card \$10.00

(For General Description see Page 1107.)



PADLOCKS.

Per Card

No. 100A—KEEN KUTTER* Assortment; Consist of One Dozen **KEEN KUTTER** Padlocks, Mounted on a Heavy Cardboard Display Stand 13x16 inches; Each Card has an Eyelet by which it may be Hung up; Also a Wire Easel by which it may be made to Stand on Show Case; The Illustration is a Reproduction of Front of Card; The Back is Printed with our **KEEN KUTTER** Trade Mark in its Original Colors; Each Lock is Fastened to Card with Ringed Staple; The Keys are so arranged they can be Unhooked and used to remove Locks\$10.00

One Card, with Locks Mounted, in a Cardboard Box.

Weight per card about 8 lbs.

For Price and Detailed Description on Locks Only see Page 1107.

- 1107 -

PADLOCKS



PADLOCKS.

TRADE MARK:
E. C. SIMMONS' KEEN KUTTER
AND
"LACED,"
REGISTERED.

Cuts Full Size.

KEEN KUTTER*

No. 101.

No. 100.

Per Dozen

No. 100—KEEN KUTTER*: 2 inch CAST BRASS CASE; Hardened Brass Spring Shackle; Spacing of Shackle, Closed, $\frac{3}{4} \times 1\frac{1}{16}$ inch; 2 Flat Steel Nickel Plated Keys; 6 Secure Brass Levers; 36 CHANGES; Weight per dozen about 6 lbs.		\$10.00
No. 100L— Same as No. 100, except Keyed All Alike.....		\$10.00
No. 101 —Same as No. 100, except with 9 INCH BRIGHT STEEL PATENT LINK CHAIN		12.00
No. 101L— Same as No. 101, except Keyed All Alike.....		12.00

No. 100 KEEN KUTTER* Padlock is an exact reproduction of our KEEN KUTTER Trade Mark.

THE CONSTRUCTION—The interior workings are of brass, excepting the spring, which is made of Heavy Phosphor Bronze; the brass rivets are cast in the case and so arranged as to form a support for the case as well as binding posts, thus protecting the mechanism from a crushing force; A Lubricant of Graphite and Oil is used in each Lock, Insuring Positive and Easy Action of the Levers.

THE CASE—Is of polished cast brass. The Trade Mark on front of lock has a raised polished brass margin with the words KEEN KUTTER in raised, polished brass letters, relieved by red enameled matted back ground.

THE SHACKLE—The shackle is of hardened polished brass, with the words "E. C. Simmons" embossed on one side and St. Louis, U. S. A. on the other, and the interior construction is so arranged as to lock both front and back, making it almost impossible for the shackle to be forced open.

THE KEYS—Each Padlock is furnished with two flat steel nickel plated keys, showing a miniature perforation of the Trade Mark in the bow.

THE CHANGES—Locks are made regularly in 36 CHANGES, thus giving unusual security and making all locks different in a dozen.

One-half Dozen in a Cardboard Box.

TRADE MARK:
"BULL DOG"
REGISTERED.



PADLOCKS.



No. 500.

BULL DOG*.

Wrought Steel, IVORY BLACK FINISH CASE; Self-locking Malleable Nickel Plated Spring Shackle; 1 Galvanized Steel Lever; 2 Nickeled Flat Steel Keys to each Lock.

No. 500—1½ INCH; 6 CHANGES; Spacing of Shackle, Closed, 11/16x11/16 inch; Weight per dozen about 1½ lbs. \$1.80

No. 502—1 INCH; 6 CHANGES; Spacing of Shackle, Closed, 7/8x7/8 inch; Weight per dozen about 2½ lbs. 2.40

One Dozen in a Cardboard Box.

No. 504—2 INCH; 12 CHANGES; Spacing of Shackle, Closed, 1 1/8x1 inch; Weight per dozen about 3 lbs. 3.00

No. 506—2 INCH; 24 CHANGES; Spacing of Shackle, Closed, 1 1/8x1 1/8 inch; Weight per dozen about 5 lbs. 4.20



No. 512.

BULL DOG*.

WROUGHT BRASS CASE; Self-locking Malleable Black Enamelled Spring Shackle; 1 Galvanized Steel Lever; 2 Nickeled Flat Steel Keys.

No. 508—1½ INCH; 6 CHANGES; Spacing of Shackle, Closed, 11/16x7/8 inch; Weight per dozen about 1½ lbs. \$3.00

No. 510—1 INCH; 6 CHANGES; Spacing of Shackle, Closed, 7/8x7/8 inch; Weight per dozen about 2½ lbs. 4.20

One Dozen in a Cardboard Box.

No. 512—2 INCH; 12 CHANGES; Spacing of Shackle, Closed, 1 1/8x1 1/8 inch; Weight per dozen about 3 lbs. 4.80

No. 514—2 INCH; 24 CHANGES; Spacing of Shackle, Closed, 1 1/8x1 1/8 inch; Weight per dozen about 5 lbs. 6.00

One-half Dozen in a Cardboard Box.

**BULL DOG*.**

Per Dozen

No. 521—2 INCH; WROUGHT STEEL CASE, Ivory Black Finish; Self-locking Malleable Nickel Plated Spring Shackle; Spacing of Shackle, Closed, 7/8x1 inch; 1 Galvanized Steel Lever; 2 Steel Nickel Plated Drilled Keys to each Lock; 12 CHANGES; Weight per dozen about 3 lbs. \$3.25

No. 5210—2 INCH; Same as No. 521 except has Brass Case and Black Enamelled Shackle. 5.00
One-half Dozen in a Cardboard Box.

**BULL DOG*.**

Per dozen

No. 496/C—1½ inch WROUGHT STEEL CASE, Black Enamelled; Malleable Iron Nickel Plated Self-locking Spring Shackle; Spacing of Shackle, Closed, 7/8x7/8 inch; 12 inch Nickel Plated Steel Chain; 1 Galvanized Lever; 2 Flat Steel Nickel Plated Keys to each Lock; 6 CHANGES \$4.50

**BULL DOG*.**

Per dozen

No. 498/C—1½ inch WROUGHT BRASS CASE, Satin Dip Finish; Malleable Iron Black Enamelled Self-locking Spring Shackle; Spacing of Shackle, Closed, 7/8x7/8 inch; 12 inch Nickel Plated Steel Chain; 1 Galvanized Lever; 2 Flat Steel Nickel Plated Keys to each Lock; 6 CHANGES \$5.50

Weight per dozen about 2 lbs.
One Dozen in a Cardboard Box.

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PADLOCKS.**MENTOR*.**

Per Dozen

No. 65—2 INCH WROUGHT STEEL CASE, BLACK ENAMELED, with Raised Parts Brass Plated; Malleable Iron Self-locking Spring Shackle, Brass Plated; Spacing of Shackle, Closed, $\frac{3}{4} \times 1\frac{1}{2}$ inch; Warded; 2 Rolled Steel Nickel Plated Barrel Keys to each Lock; 6 CHANGES; Weight per dozen about 3 lbs. \$4.50

One Dozen in a Cardboard Box.



Showing Back of Lock.



Showing Front of Lock.

SIMMONS* SIX LEVER.

Per Dozen

No. 5—2 $\frac{1}{2}$ INCH WROUGHT STEEL CASE, BLACK ENAMELED, with Raised Parts Polished; Malleable Iron Self-locking Spring Shackle, Brass Plated; Spacing of Shackle, Closed, $\frac{3}{4} \times 1\frac{1}{2}$ inches; 6 Brass Levers; 2 Malleable Barrel Keys; 12 CHANGES; Weight per dozen about 4 $\frac{1}{2}$ lbs. \$4.60

**WIRELESS*.**

Cast Brass Polished Self-locking Spring Shackle; Spacing of Shackle, Closed, $\frac{3}{4} \times 1\frac{1}{2}$ inches; Brass Works; One Lever; 2 Flat Steel Keys, Nickel Plated; 12 CHANGES.

Per Dozen

No. 90—2 INCH CAST BRASS CASE, with Green Enameled Front, Raised Parts Polished; Plain Matted Back, Raised Parts Polished; Weight per dozen about 4 lbs. \$5.00

**BULL'S EYE*.**

Per Dozen

No. 732—2 INCH STEEL CASE, BLACK ENAMELED, with Raised Polished Letters; Plain Wrought Brass Polished Re-enforced Ends; Malleable Iron Black Enameled Self-locking Spring Shackle; Spacing of Shackle, Closed, $\frac{3}{4} \times 1\frac{1}{2}$ inches; 2 Corrugated Steel Nickel Plated Keys to Each Lock; 6 CHANGES; Weight per dozen about 4 lbs. \$6.50



Blued Steel Self-locking Spring Shackle; Spacing of Shackle, Closed, $1 \times 1\frac{1}{2}$ inch; 2 Secure Levers; 2 Nickel Plated Flat Steel Keys; Brass Interior Works; 12 CHANGES.

Per Dozen

No. 64072 $\frac{1}{2}$ —2 INCH WROUGHT BRASS CASE, Satin Dip Finish, with Raised Polished Surface; Weight per dozen about 4 lbs. \$6.50

One-half Dozen in a Cardboard Box.



Per Dozen

No. 412—2 INCH CAST IRON CASE, BOWER-BARFF FINISH, with Wrought Steel Brass Plated Panel; Steel Self-locking Spring Shackle, Brass Plated, Swings either Right or Left; Spacing of Shackle, Closed, 1×1 inch; 2 Flat Steel Nickel Plated Keys to each Lock; 4 CHANGES; Weight per dozen about 5 lbs. \$6.60

-1111-
PADLOCKS.



No. 1233—2 INCH CAST BRASS POLISHED CASE; Self-locking Brass Spring Shackle; Spacing of Shackle, Closed, $1\frac{1}{16} \times \frac{3}{4}$ inch; Spring Keyhole Drop; 1 Brass Lever and Ward; 2 Cast Brass Drilled Keys to each Lock; 6 CHANGES; Weight per dozen about 4½ lbs. \$10.00



SEAMLESS STEEL CASE, BOWER-BARFF FINISH; Steel Nickel Plated Self-locking Spring Shackle; Spacing of Shackle, Closed, $\frac{3}{4} \times \frac{1}{2}$ inch; Brass Rivets; 3 Lever Tumblers; 2 Flat Steel Keys (No. 77) to each Lock; 48 CHANGES. Per Dozen
No. 230—1½ INCH CASE; Weight per dozen about 4 lbs. \$11.35
No. 430—2 INCH CASE; Weight per dozen about 6¼ lbs. 13.90



SIMMONS*. Per Dozen
No. 80—2 INCH WROUGHT BRASS CASE, SATIN DIP FINISH; Wrought Brass Self-locking Spring Shackle, Polished; Spacing of Shackle, Closed, $1\frac{1}{16} \times 1$ inch; 3 Brass Levers; 2 Rolled Steel Nickel Plated Barrel Keys to each Lock; 12 CHANGES; Weight per dozen about 3½ lbs. \$17.75

One-half Dozen in a Cardboard Box.



No. 4059—2 INCH WROUGHT STEEL EM-BOSSED CASE, ANTIQUE SILVER FINISH; Brass Rivets; Heavy Cast Brass Self-locking Spring Shackle; Spacing of Shackle, Closed, 1x1 inch; 4 Brass Secure Levers; Brass Revolving Keyway; 2 Flat Steel Keys to each Lock; 12 CHANGES; Weight per dozen about 5 lbs. \$10.00



LACLEDE*.
CAST BRASS POLISHED CASE, with Raised Polished Letters; Cast Brass Self-locking Spring Shackle; Spacing of Shackle, Closed, $\frac{9}{16} \times \frac{3}{4}$ inch; Wrought Brass Inside Works; 6 Secure Levers; 2 Nickel Plated Flat Steel Keys to each Lock; 36 CHANGES. Per Dozen
No. 1M—2¼ INCH CASE; Weight per dozen about 5 lbs. \$11.50
No. 10M—2¼ INCH CASE; 9 INCH POLISHED STEEL CHAIN; Weight per dozen about 7 lbs. \$14.00



No. 326—2¼ INCH CAST IRON CASE, Bower-Barff Finish; Steel Discs, Copper Plated Polished; Self-locking Steel Spring Shackle, Copper Plated Polished; Spacing of Shackle, Closed, $\frac{3}{4} \times \frac{1}{2}$ inch; 2 Wards; 2 Flat Steel Nickel Plated Keys No. 412 to each Lock; 6 CHANGES; Weight per dozen about 7 lbs. \$11.95

-1113-
PADLOCKS.



HEAVY CAST BRONZE CASE, with Polished Raised Surface; Cast Bronze Polished Self-locking Spring Shackle; Cast Bronze Inside Works; 2 Nickel Plated Flat Steel Keys to each Lock, all different.

Per Dozen

- No. 813**—1 INCH; 3 Tumblers; 54 CHANGES; Spacing of Shackle, Closed, $\frac{3}{4} \times \frac{1}{2}$ inch; Weight per dozen about 2 lbs. \$20.00
- No. 823**—1½ INCH; 3 Tumblers; 54 CHANGES; Spacing of Shackle, Closed, $\frac{1}{2} \times \frac{11}{16}$ inch; Weight per dozen about 2½ lbs. 22.00
- No. 833**—1½ INCH; 3 Tumblers; 54 CHANGES; Spacing of Shackle, Closed, $\frac{7}{16} \times \frac{3}{4}$ inch; Weight per dozen about 4 lbs. 25.00
- No. 843**—1½ INCH; 4 Tumblers; 82 CHANGES; Spacing of Shackle, Closed, $\frac{3}{4} \times \frac{3}{4}$ inch; Weight per dozen about 5 lbs. 28.05
- No. 853**—2 INCH; 4 Tumblers; 144 CHANGES; Spacing of Shackle, Closed, $\frac{3}{4} \times 1$ inch; Weight per dozen about 7 lbs. 31.00

One-half Dozen in a Cardboard Box.



Per Dozen

- No. 863**—2 INCH HEAVY CAST BRONZE CASE, Raised Surfaces Buffed; Cast Bronze Self-locking Spring Shackle; Spacing of Shackle, Closed, $1\frac{3}{16} \times 1$ inch; 9 INCH TINNED IRON CHAIN; 4 Tumblers; 2 Flat Steel Keys to each Lock, 144 CHANGES; Weight per dozen about 8 lbs. \$35.20

One-quarter Dozen in a Cardboard Box.



Per Dozen

- No. 851**—2 INCH HEAVY CAST BRONZE CASE; Self-locking Bright Steel Spring Shackle; Spacing of Shackle, Closed, $1\frac{1}{16} \times \frac{3}{4}$ inch; 5 Pin Tumblers; 2 Paracentric Steel Keys; **CHANGES UNLIMITED**; Weight per dozen about 8 lbs. \$49.55

One-half Dozen in a Cardboard Box.



HEAVY WROUGHT STEEL CASE, Bower-Barff Rustless Finish, Brass Caps, Brass Rivets; Self-locking Forged Steel Spring Shackle; 2 Corrugated Steel Keys to each Lock.

Per Dozen

- No. 8434**—1½ INCH; Spacing of Shackle, Closed, $\frac{9}{16} \times \frac{3}{4}$ inch; 3 Bronze Tumblers; 48 CHANGES; Weight per dozen about 3 lbs. \$16.90
- No. 8454**—2 INCH; 4 Bronze Tumblers; 144 CHANGES; Spacing of Shackle, Closed, $\frac{3}{4} \times 1$ inch; Weight per dozen about 6 lbs. 20.85
- No. 84654**—2 INCH; Same as No. 8454, except 9 INCH TINNED IRON CHAIN; Weight per dozen about 7 lbs. 23.85

One-half Dozen in a Cardboard Box.



Note—Use no Oil in this Lock. To operate, put Key in Cylinder and pull down on Shackle or push up on Key.

Per Dozen

- No. 9005**—2 INCH CAST IRON CASE, BOWER-BARFF RUSTLESS FINISH, with Polished Raised Surface; Heavy Cast Bronze Polished Self-locking Spring Shackle, Swings both ways; Spacing of Shackle, Closed, $1\frac{5}{16} \times \frac{3}{4}$ inch; 9 INCH GALVANIZED IRON CHAIN; Bronze Works; 4 Pin Tumblers; 2 Corrugated Steel Keys No. 106½ to each Lock; 144 CHANGES; Weight per dozen about 9 lbs. \$24.85

One-half Dozen in a Cardboard Box.

Keys for No. 9005 Yale Padlocks cannot be duplicated by numbers, one of the originals must be returned if possible, or if these are lost the Lock itself must be returned for new Keys.



WROUGHT STAPLES.



Wrought Iron, Pointed.

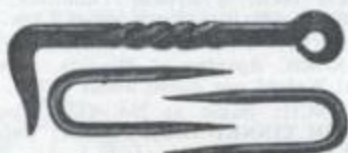
Inches	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/2	4
Weight per gross about, lbs.	3/4	1	1 1/2	2	2 1/2	3	4	6	8 1/2	11
Per gross	\$1.20	1.20	1.25	1.50	1.70	2.00	2.35	3.20	3.70	5.25

Per Gross

Assorted, from 1 1/4 to 3 inch; Weight per gross about 3 lbs. \$2.00

One Gross in a Cardboard Box.

HOOKS AND STAPLES.



WROUGHT IRON.

Inches	3	4	4 1/2	5
Weight per gross about, lbs.	12	15	18	21
Per gross	\$8.00	10.00	11.00	12.00
Inches	6	7	8	
Weight per gross about, lbs.	25	40	44	
Per gross	\$14.00	22.00	25.00	

HEAVY WROUGHT IRON.

Inches	4	5	6
Weight per gross about, lbs.	21	32	40
Per gross	\$13.00	16.00	19.00

One-quarter Gross in a Cardboard Box.



Heavy Wire, Polished.

	Per Gross
No. 14—1/4 inch Wire, 4 inches Long; Weight per gross about 20 lbs.	\$4.00
No. 15—5/16 inch Wire, 5 inches Long; Weight per gross about 30 lbs.	5.25
No. 16—5/16 inch Wire, 6 inches Long; Weight per gross about 37 lbs.	5.60

One-quarter Gross in a Cardboard Box.

GATE HOOKS AND STAPLES.



PROCTOR'S SAFETY.

Malleable Iron Hook, with 3 inch Wrought Staples.

SELF-COLORED.

No.	1	2
Length, inches	4 1/2	7
Weight per gross about, lbs.	48	66
Per gross	\$14.50	18.00

TINNED.

Nos.	3	4
Length, inches	4 1/2	7
Weight per gross about, lbs.	48	66
Per gross	\$18.00	21.50

One-twelfth Gross in a Cardboard Box.



No. 100—Safety, Tinned; Malleable Hooks, Wrought Staple.

Inches	4	5	6
Weight per gross about, lbs.	24	27	30
Per gross	\$13.00	15.00	17.00

One-sixth Gross in a Cardboard Box.

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HASPS AND STAPLES.

WROUGHT IRON.

Inches	4	5	6	7	8	10
Weight per dozen about, lbs.....	1	1½	2	2½	3½	4¾
Per dozen	\$0.84	.90	1.00	1.10	1.30	2.00

HOOKS, HASPS AND STAPLES.

WROUGHT IRON.

Inches	5	6	7	8	9	10
Wgt. per doz. about, lbs. 1½ 2½ 3 4 4½ 5						
Per dozen	\$1.20	1.40	1.60	1.80	2.20	2.50

EXTRA HEAVY HOOKS, HASPS AND STAPLES.

EXTRA HEAVY; ½ INCH WROUGHT IRON.

Inches	8	9	10
Weight per dozen about, lbs.....	7	8	9
Per dozen	\$4.00	4.50	5.00

HASPS AND STAPLES.

PERFECT.

No. 210—7 inch, STEEL; Weight per dozen about	Per Dozen
2½ lbs	\$1.10

One Dozen in a Cardboard Box.

BENT HASPS AND STAPLES.

WROUGHT IRON.

Inches	6	8
Weight per dozen about, lbs.....	2	3½
Per dozen	\$1.30	1.60

TRAP DOOR RINGS WITH STAPLES.Trap Door Rings, with Staples;
Wrought Iron.

Inches	2	2½	3
Weight per gross about, lbs.....	18	26	36
Per gross	\$16.00	19.00	26.00

One-quarter Gross in a Cardboard Box.

HINGE HASPS.



No. 941.
Extra Heavy Steel.

HASP, $7\frac{1}{2} \times 1\frac{1}{4} \times \frac{5}{32}$ inches. Countersunk for No. 12
Screw. STAPLE PLATE, $2\frac{1}{2} \times 1\frac{1}{4} \times \frac{5}{32}$ inches.

BRIGHT.

No.	941
Weight per single dozen about, lbs.....	10
Per single dozen	\$6.75

JAPANNED.

No.	941J
Weight per single dozen about, lbs.....	11
Per single dozen	\$7.75

One Single Dozen in a Cardboard Box, without Screws.



Wrought Steel.

No. 912—PLAIN STEEL.

Inches	3	4½	6	8	10
Width of Joints, inches	1½	1¾	1¾	1¾	2½
Size Screw, No.....	6	7	9	10	10
Weight per dozen about, lbs.....	2	2½	5	7½	12½
Single dozen in a barrel	250	180	96	60	40
Weight per barrel about, lbs.....	600	650	650	650	600
Per single dozen	\$0.50	.60	.80	1.05	1.50



No. 915.
Safety, Wrought Steel.

No. 915—BRIGHT.

Inches	3	4½	6
Size Screw, No.....	7	7	9
Weight per single dozen about, lbs...	3	3½	8½
Per single dozen.....	\$0.90	1.20	1.70

No. 915J—JAPANNED.

Inches	3	4½	6
Size Screw, No.....	7	7	9
Weight per single dozen about, lbs...	3	3½	8½
Per single dozen.....	\$1.10	1.50	2.20

Packed Loose, without Screws.

No. 915A—BRONZE PLATED.

Inches	3	4½	6
Size Screw, No.....	7	7	9
Weight per single dozen about, lbs...	3	3½	8½
Per single dozen	\$1.75	2.20	3.00

Safety, Wrought Steel.

Per Single Dozen

No. 922—6 inch; Wrought Steel, BRIGHT FINISH;
Double Hinged; Adapted for either a Tool
Box or Hinge Hasp on Door; Countersunk for
No. 9 Screw

\$2.25

No. 922/J—Same as No. 922, except JAPANNED
FINISH

2.65

One Single Dozen in a Cardboard Box; Without Screws;
Weight per Single Dozen about 10 lbs.

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CASTERS.**TUCKER'S PATENT.**

Bronze Finished; Cast Iron Frames, Plates and Stems; Steel Axles and Frame Pins; Polished Lignumvitae Wheels.



No. 227.

No. 228.

ROUND PLATE.

Nos	227	228	247	257
Diameter of Wheels, inches...	1 1/4	1 1/4	1 1/4	1 1/4
Diameter of Plate, inches...	1 1/4	1 1/4	1 1/4	2
Weight per set about, lbs...	3/4	1 1/4	1 1/2	2
Per set of 4...	\$0.40	.45	.50	.60

OBLONG PLATE.

Nos	228	238	248	258
Diameter of Wheels, inches...	1 1/4	1 1/4	1 1/4	1 1/4
Length of Plate, inches...	1 1/2	1 15/16	2 3/16	2 1/2
Weight per set about, lbs...	3/4	1 1/4	1 1/2	2
Per set of 4...	\$0.40	.45	.50	.60

**STEM.**

Nos	229	239	249	259
Diameter of Wheels, inches...	1 1/4	1 1/4	1 1/4	1 1/4
Diameter of Plate, inches...	1 1/16	1 3/8	1 5/8	1 13/16
Length of Stem, inches...	3/4	1	1 1/4	1 1/2
Weight per set about, lbs...	3/4	1 1/4	1 1/2	2 1/4
Per set of 4...	\$0.40	.45	.50	.60

One Set in a Cardboard Box.

PAYSON'S ANTI-FRICTION.

Bronze Finish Cast Iron Frames and Plates; Steel Stems, Axles and Roller Bearings.



No. 372.

No. 373.

**OBLONG PLATE.
IRON WHEEL.**

Nos	372	373	374	376
Diameter of Wheel, inches...	1 1/4	1 1/4	1 1/4	2
Length of Plate, inches...	2	2 3/4	2 3/4	3 1/4
Weight per set about, lbs...	1	1 1/2	2 3/4	4
Per set of 4...	\$0.60	.75	.95	1.25

LIGNUMVITAE WHEEL.

Nos	382	383	384	386
Diameter of Wheel, inches...	1 1/4	1 1/4	1 1/4	2
Length of Plate, inches...	2	2 3/4	2 3/4	3 1/4
Weight per set about, lbs...	1 1/4	1 1/2	3	3
Per set of 4...	\$0.65	.80	1.00	1.35

**COMMON STEM.
IRON WHEEL.**

Nos	333	334
Diameter of Wheel, inches...	1 1/4	1 1/4
Diameter of Plate, inches...	1 5/8	1 13/16
Weight per set about, lbs...	1 1/2	2 1/4
Per set of 4...	\$0.75	.95

LIGNUMVITAE WHEEL.

Nos	343	344
Diameter of Wheel, inches...	1 1/4	1 1/4
Diameter of Plate, inches...	1 1/4	1 1/4
Weight per set about, lbs...	1 1/4	2
Per set of 4...	\$0.80	1.00

**PHILADELPHIA STEM.
IRON WHEEL.**

No. 452—Diameter of Wheel	Per Set of 4
1 1/4 inches; Diameter of Plate 1 1/4 inches;	
Weight per set about 2 lbs.	\$0.60

One Set in a Cardboard Box.



CASTERS.



ROUND PLATE; EXTRA HEAVY.
BRONZED.
Iron Wheels.

Nos.	M21	M31	M41	M51	M61
Diameter of Wheels, inches...	1	1 1/4	1 1/2	1 3/4	2
Diameter of Plate, inches...	1 1/4	1 1/2	1 3/4	2	2 1/4
Weight per set about, lbs.	1 1/4	2	3	4	5
Per set of 4	\$0.80	.85	.90	1.00	1.25

Lignumvitae Wheels.

Nos.	M27	M37	M47	M57
Diameter of Wheels, inches...	1	1 1/4	1 1/2	1 3/4
Diameter of Plate, inches...	1 1/4	1 1/2	1 3/4	2
Weight per set about, lbs.	1	1 1/2	2 1/4	3
Per set of 4	\$0.85	.90	.95	1.05

One Set in a Cardboard Box.



STEM PLATE.
BRONZED.
Iron Wheels.

Nos.	M23	M33	M43
Diameter of Wheels, inches	1	1 1/4	1 1/2
Diameter of Stem, inches	3/8	7/16	1/2
Length of Stem, inches	1	1 1/4	1 1/2
Diameter of Plate, inches	1 1/4	1 1/2	1 3/4
Weight per set about, lbs.	1 1/4	2 1/4	3 1/4
Per set of 4	\$0.80	.85	.90

Lignumvitae Wheels.

Nos.	M29	M39	M49
Diameter of Wheels, inches	1	1 1/4	1 1/2
Diameter of Stem, inches	3/8	7/16	1/2
Length of Stem, inches	1	1 1/4	1 1/2
Diameter of Plate, inches	1 1/4	1 1/2	1 3/4
Weight per set about, lbs.	1	2	2 1/4
Per set of 4	\$0.85	.90	.95

One Set in a Cardboard Box.



OBLONG PLATE; EXTRA HEAVY.
BRONZED.
Iron Wheels.

Nos.	M22	M32	M42	M52	M62
Diameter of Wheels, inches...	1	1 1/4	1 1/2	1 3/4	2
Length of Plate, inches...	1 1/4	2 1/4	2 3/4	3	3 1/4
Width of Plate, inches...	1 1/4	1 1/2	1 3/4	2	2 1/4
Weight per set about, lbs.	1 1/4	2	3 1/4	4	5
Per set of 4	\$0.80	.85	.90	1.00	1.25

Lignumvitae Wheels.

Nos.	M28	M38	M48	M58
Diameter of Wheels, inches...	1	1 1/4	1 1/2	1 3/4
Length of Plate, inches	1 1/4	2 1/4	2 3/4	3
Width of Plate, inches	1 1/4	1 1/2	1 3/4	2
Weight per set about, lbs.	1 1/4	2	3 1/4	4
Per set of 4	\$0.85	.90	.95	1.05

One Set in a Cardboard Box.



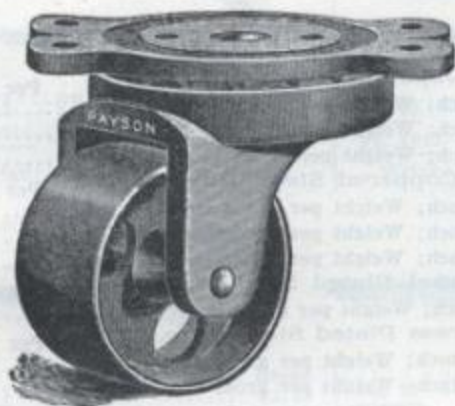
TRUCK.
OBLONG PLATE; EXTRA HEAVY.
PLAIN FINISH.
Iron Wheels.

Nos.	M82	M102	M112
Diameter of Wheels, inches...	2 1/2	3 1/4	3 3/4
Length of Plate, inches...	4 3/4	4 3/4	5
Width of Plate, inches...	3 3/4	3 3/4	3 1/2
Weight per set about, lbs.	12	14	20
Per set of 4	\$2.00	2.50	3.75

Packed Loose.

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TRUCK CASTERS.



PAYSON'S OBLONG PLATE.

Natural Finish Heavy Cast Iron Frame, Wheel and Plate; Steel Axle, Riveted to Frame; Steel Roller Bearings under Plate; Plate attached to Frame by Heavy Iron Rivet.

- | | Per set of 4 |
|--|--------------|
| No. 188—Diameter of WHEEL 2½ INCHES; Size of Plate 2½x4½ inches; Width of Wheel 1½ inches; Weight per set about 8 lbs..... | \$2.75 |
| No. 190—Diameter of WHEEL 3½ INCHES; Size of Plate 3x5 inches; Width of Wheel 1½ inches; Weight per set about 14 lbs..... | 4.50 |
| No. 192—Diameter of WHEEL 4 INCHES; Size of Plate 3½x6 inches; Width of Wheel 2¼ inches; Weight per set about 36 lbs..... | 13.00 |



STATIONARY.

Japanned Cast Iron Frame, Wheel and Plate; Steel Axles.

- | | Per Single Dozen |
|---|------------------|
| No. 3289—With Riveted Axle; Diameter of WHEEL 2½ INCHES; Width of Wheel Face ¾ inch; Size of Plate 4½x2½ inches; Height over all 3½ inches; Weight per dozen about 18 lbs..... | \$2.65 |
| No. 5489—With Bolt and Nut Axle; Noiseless Turned Wheel Face; Diameter of WHEEL 4 INCHES; Width of Wheel Face 1½ inches; Size of Plate 5½x3½ inches; Height over all 5½ inches; Weight per dozen about 48 lbs.... | 8.50 |



SWIVEL.

Japanned Cast Iron Frame, Wheel, Plate and Stem; Steel Riveted Axles.

- | | Per Single Dozen |
|--|------------------|
| No. 3389—Diameter of WHEEL 2½ INCHES; Width of Wheel Face ¾ inch; Size of Plate 2½x2½ inches; Length of Stem 1½ inches; Diameter of Stem ¾ inch; Height over all 5½ inches; Weight per dozen about 19 lbs..... | \$3.00 |
| No. 5389—Diameter of WHEEL 4 INCHES; Width of Wheel Face 1½ inches; Size of Plate 2½x2½ inches; Length of Stem 1½ inches; Diameter of Stem 1½ inches; Height over all 7½ inches; Weight per dozen about 50 lbs.... | 5.10 |



STATIONARY.

- | | Per Single Dozen |
|--|------------------|
| No. 3089—Natural Finish Cast Iron Frame, Wheel and Plate; Steel Riveted Axle; Diameter of WHEEL 3½ INCHES; Width of Wheel Face 1 inch; Size of Plate 3½x3½ inches; Height over all 4½ inches; Weight per dozen about 37 lbs..... | \$4.10 |

Packed Loose.



COAT AND HAT HOOKS.



Japaned Steel Wire.

	Per Gross
No. 60—2½ inch; Weight per gross about 6 lbs.	\$2.30
No. 70—3 inch; Weight per gross about 9 lbs.	2.55
No. 80—3½ inch; Weight per gross about 11 lbs.	3.20

Coppered Steel Wire.

	Per Gross
No. 160—2½ inch; Weight per gross about 6 lbs.	\$2.20
No. 170—3 inch; Weight per gross about 9 lbs.	2.40
No. 180—3½ inch; Weight per gross about 11 lbs.	3.00

Nickel Plated Steel Wire.

	Per Gross
No. 170N—3 inch; Weight per gross about 9 lbs.	\$4.50

Brass Plated Steel Wire.

	Per Gross
No. 1170—3 inch; Weight per gross about 9 lbs.	\$4.00
No. 1180—3½ inch; Weight per gross about 11 lbs.	5.00

No. 60 and 160, One Gross in a Cardboard Box; Others One-half Gross in a Cardboard Box; Twelve Gross in a Case.



	Per Gross
No. 578B—3½ inch; Weight per gross about 11 lbs.	\$2.00



	Per Gross
No. 89B—4 inch; Weight per gross about 36 lbs.	\$2.25
One-half Gross in a Box.	



	Per Gross
No. 023B—3 inch; Weight per gross about 16 lbs.	\$2.75

Copper Bronzed, Cast Iron.

BRASS SCREW HOOKS.



No. 180, ¾ inch.



No. 180, 1 inch.

Wrought Brass Cup.

No. 180—Polished and Lacquered.

Inches	1/2	5/8	3/4	7/8	1	1¼	1½
Wgt. gross abt., lbs.	¼	½	¾	1	1½	2	2½
Per gross	\$3.75	3.85	4.00	4.50	5.25	9.00	11.00

One Gross in a Cardboard Box.



Desk Hooks or Paper Files.

	Per Gross
No. 191—2½x1½ inches; Wrought Brass; Brass Base; Weight per gross about 2 lbs.	\$8.00

Wrought Brass Screws.

No. 2145—Brass Wire, Polished and Lacquered.

Inches	1/2	5/8	3/4	1	1¼	1½
Weight per gross about, lbs.	¼	½	¾	1½	2	2½
Per gross	\$3.75	3.85	4.00	5.25	9.00	11.00

One-half Gross in a Cardboard Box.



No. 2145, 1 inch.

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WIRE SCREW HOOKS.

Cuts Full Size.





Per Gross
No. 11 —BRIGHT \$1.80
No. 1014—BRASS 3.25
 Weight per Gross about $\frac{1}{2}$ lb.




Per Gross
No. 13 —BRIGHT \$1.90
No. 1013—BRASS 4.25
 Weight per Gross about $\frac{1}{2}$ lb.




Per Gross
No. 12 —BRIGHT \$2.00
No. 1012—BRASS 5.50
 Weight per Gross about $\frac{3}{4}$ lb.



Per Gross
No. 11 —BRIGHT \$2.20
No. 1011—BRASS 7.50
 Weight per Gross about 1 lb.



Per Gross
No. 10 —BRIGHT \$2.40
No. 1010—BRASS 9.50
 Weight per Gross about $1\frac{1}{4}$ lbs.



Per Gross
No. 9 —BRIGHT \$2.80
No. 1009—BRASS 12.00
 Weight per Gross about $1\frac{1}{2}$ lbs.




Per Gross
No. 8 —BRIGHT \$3.50
No. 1008—BRASS 15.00
 Weight per Gross about 2 lbs.




Per Gross
No. 7—BRIGHT; Weight per gross about 3 lbs... \$4.00

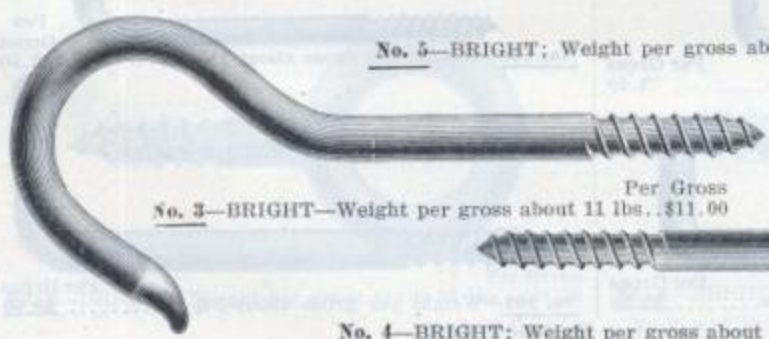
One Gross in a Cardboard Box.



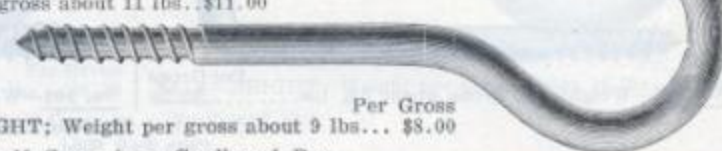
Per Gross
No. 6—BRIGHT; Weight per gross about 6 lbs... \$5.50



Per Gross
No. 5—BRIGHT; Weight per gross about 7 lbs... \$6.50



Per Gross
No. 3—BRIGHT—Weight per gross about 11 lbs... \$11.00



Per Gross
No. 4—BRIGHT; Weight per gross about 9 lbs... \$8.00
 One-half Gross in a Cardboard Box.

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BRIGHT WIRE SCREW HOOKS.



No. 2—Weight per gross
about 13 lbs. \$13.00



No. 1—Weight per gross
about 16 lbs. \$15.50
One-half Gross in a Cardboard Box.



No. 0—Weight per gross
about 20 lbs. \$18.00



No. 114—Weight per gross about $\frac{1}{4}$ lb. \$1.80



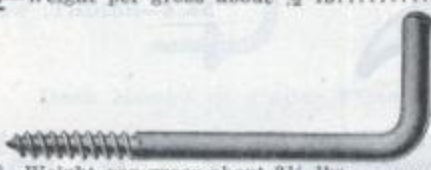
No. 110—Weight per gross about $1\frac{1}{2}$ lbs. \$1.40



No. 106—Weight per gross about $3\frac{1}{4}$ lbs. \$5.50



No. 112—Weight per gross about $\frac{1}{2}$ lb. \$2.00



No. 108—Weight per gross about $2\frac{1}{2}$ lbs. \$3.50



No. 104—Weight per gross about 5 $\frac{1}{4}$ lbs. \$8.00

One Gross in a Cardboard Box.
Cuts Full Size.

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WIRE SCREW EYES.



Per Gross
No. 14—BRIGHT ..\$1.30
No. 1014—BRASS ... 3.00

Weight per Gross about $\frac{1}{2}$ lb.

Per Gross
No. 13—BRIGHT ..\$1.40
No. 1013—BRASS ... 3.50



Per Gross
No. 12—BRIGHT ..\$1.50
No. 1012—BRASS ... 4.50

Weight per Gross about 1 lb.



Per Gross
No. 11—BRIGHT ..\$1.75
No. 1011—BRASS ... 6.50



Per Gross
No. 10—BRIGHT \$2.00
No. 1010—BRASS 8.00

Weight per Gross about $1\frac{1}{4}$ lbs.

Per Gross
No. 9—BRIGHT \$2.25
No. 1009—BRASS 10.00

Weight per Gross about $2\frac{1}{4}$ lbs.

Per Gross
No. 8—BRIGHT \$2.50
No. 1008—BRASS 12.00

Weight per Gross about 3 lbs.



Per Gross
No. 7—BRIGHT; Weight per
gross about 5 lbs..... \$3.00



Per Gross
No. 6—BRIGHT; Weight per
gross about 6 lbs..... \$3.50



Per Gross
No. 5—BRIGHT; Weight per
gross about 7 lbs..... \$4.50



Per Gross
No. 4—BRIGHT; Weight per gross about 9 lbs... \$5.50

One Gross in a Cardboard Box.



Per Gross
No. 3—BRIGHT; Weight per gross about 11 lbs.. \$7.00



Per Gross
No. 2—BRIGHT; Weight per gross about 13 lbs.. \$8.50

One-half Gross in a Cardboard Box.
Cuts Full Size.

Per Gross
No. 1—BRIGHT; Weight per gross about 16 lbs.. \$11.00

BRIGHT WIRE SCREW EYES.



Per Gross
No. 114—Weight
per gross
about ½ lb. \$1.20



Per Gross
No. 113—Weight
per gross
about ½ lb. \$1.20



Per Gross
No. 112—Weight
per gross
about ¾ lb. \$1.40



Per Gross
No. 111—Weight
per gross
about 1 lb. \$1.60



Per Gross
No. 110—Weight
per gross
about 1 ¼ lbs. \$1.80



Per Gross
No. 109—Weight per gross
about 1 ¼ lbs. \$2.00



Per Gross
No. 108—Weight per gross
about 2 lbs. \$2.30



Per Gross
No. 107—Weight per gross
about 2 ½ lbs. \$2.75



Per Gross
No. 106—Weight per gross
about 3 ¼ lbs. \$3.25



Per Gross
No. 105—Weight per gross
about 4 lbs. \$4.00



Per Gross
No. 104—Weight per gross
about 5 lbs. \$5.00



No. 12 ½—MOSQUITO; Weight per gross about 6 lbs. Per Gross \$7.80



Straight.

Per Gross
No. 406—No. 5 Wire; Diameter of Eye ¾ inch, inside; Weight per Gross about 6 ¾ lbs. \$7.20



Bent.

Per Gross
No. 0406—No. 6 Wire; Extreme Length 2 ¾ inches; Diameter of Opening, ¾ inch; Weight per gross about 7 lbs. \$8.70

One Gross in a Cardboard Box.

Cuts Full Size.

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WIRE SCREW EYES.


No. 214 1/2—BRIGHT Per Gross \$1.10



No. 214—BRIGHT Per Gross \$1.10
No. 1214—BRASS 3.00
Weight per Gross about 1 lb.




No. 213—BRIGHT Per Gross \$1.20
No. 1213—BRASS 3.00




No. 212—BRIGHT Per Gross \$1.30
No. 1212—BRASS 3.75



No. 211—BRIGHT Per Gross \$1.40
No. 1211—BRASS 5.25




No. 210—BRIGHT Per Gross \$1.70
No. 1210—BRASS 6.00
Weight per Gross about 1 1/2 lbs.



No. 209—BRIGHT Per Gross \$1.90
No. 1209—BRASS 7.00
Weight per Gross about 1 1/2 lbs.



No. 208—BRIGHT Per Gross \$2.20
No. 1208—BRASS 9.00



No. 207—BRIGHT Per Gross \$2.50



No. 206—BRIGHT; Weight per gross about 2 1/2 lbs Per Gross \$3.00

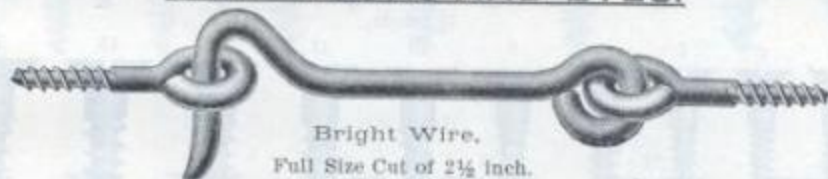


No. 205—BRIGHT; Weight per gross about 4 1/4 lbs Per Gross \$3.50



No. 204—BRIGHT; Weight per gross about 3 1/2 lbs Per Gross \$4.50

One Gross in a Cardboard Box. Cuts Full Size.

GATE HOOKS AND EYES.

Bright Wire.

Full Size Cut of 2 1/2 inch.

Nos.	1 1/2 BW	2 BW	2 1/2 BW	3 BW	3 1/2 BW	4 BW	4 1/2 BW	5 BW	6 BW
Inches	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Weight per gross about, lbs.	3 1/2	5	6 1/2	8	10	12	15	17	20
Per gross	\$6.00	7.50	8.50	10.00	12.50	13.50	17.00	20.00	25.00

Brass Wire.

Nos.	1 1/2 B	2 B	2 1/2 B	3 B	3 1/2 B	4 B
Inches	1 1/2	2	2 1/2	3	3 1/2	4
Weight per gross about, lbs.	3 1/2	5	6 1/2	8	10	12
Per gross	\$21.00	27.00	34.00	46.00	58.00	61.50

One-half Gross in a Cardboard Box.

HAND RAIL SCREWS.

Wrought Iron.



No. 156—1 Nut; 4 1/2 x 7/16 inch; Weight per gross about 16 lbs. Per Gross \$10.00

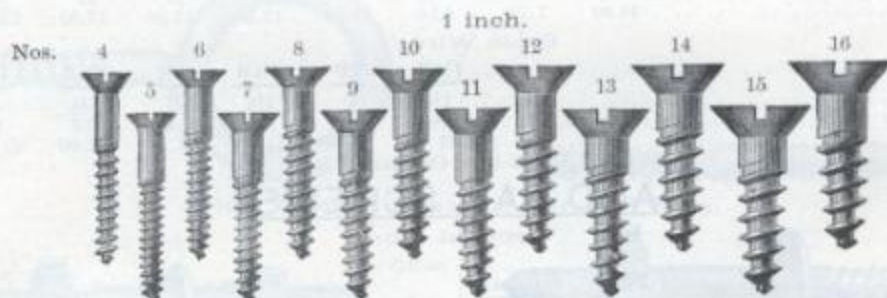
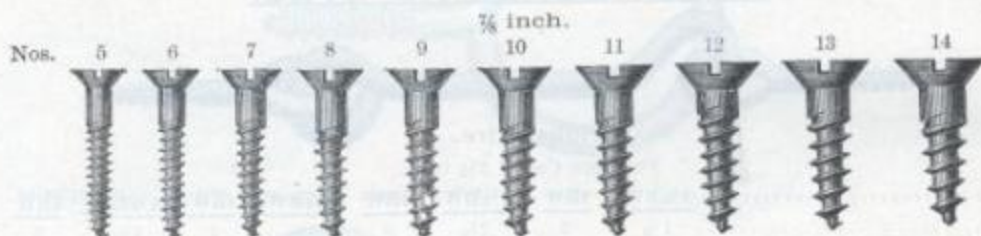
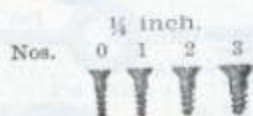


No. 256—2 Nuts; 4 1/2 x 7/16 inch; Weight per gross about 24 lbs. Per Gross \$11.25

One-quarter Gross in a Cardboard Box.



SCREWS.



For Price List See Pages 1567 and 1568.

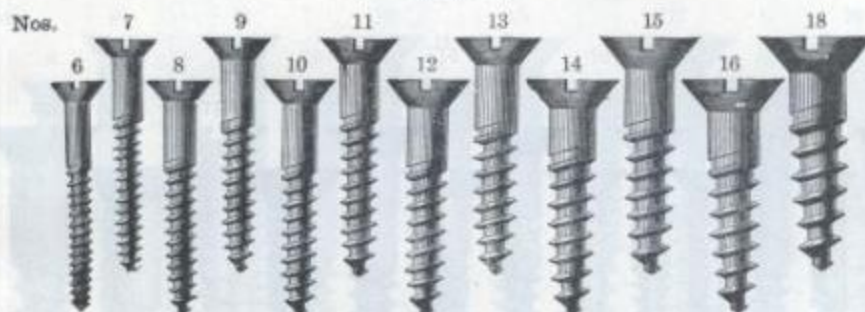
Cuts Full Size.

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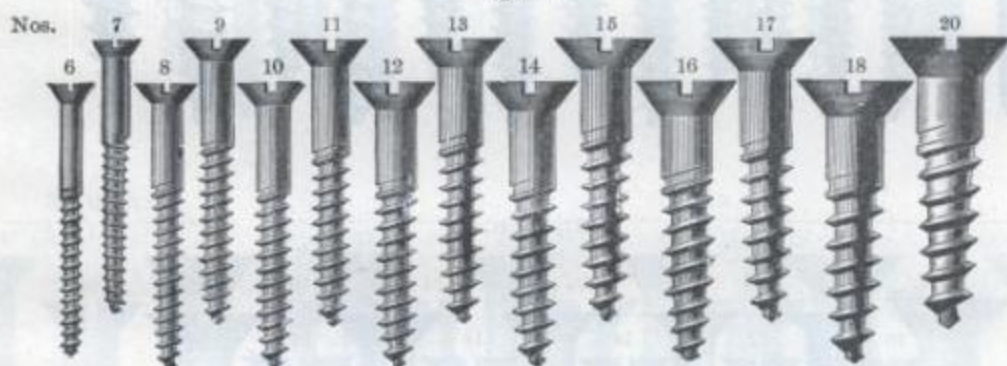


SCREWS.

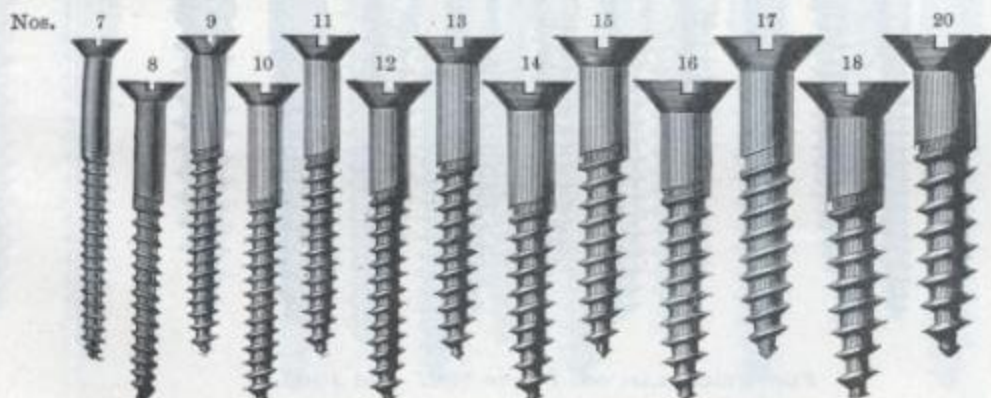
1 1/4 inch.



1 1/2 inch.



1 3/4 inch.



For Price List see Pages 1567 and 1568.

Cuts Full Size.



SCREWS.

2 inch.



2 1/4 inch.



For Price List see Pages 1567 and 1568.

Cuts Full Size.

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SCREWS.



For Price List see Pages 1567 and 1568.

Cuts Full Size.

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SCREWS.

3½ inch.

Nos. 14



16



18



20



22



24



4 inch.

Nos. 16



18



20



22



24



For Price List see Pages 1567 and 1568.
Cuts Full Size.

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PRICE LIST OF IRON SCREWS.

Flat Head: Bright. Adopted July 22d, 1903.

No.	Per Gro.	No.	Per Gro.	No.	Per Gro.	No.	Per Gro.	No.	Per Gro.	No.	Per Gro.
<u>3/4 inch.</u>		<u>3/4 inch.</u>		<u>1 inch.</u>		<u>1 1/4 inch.</u>		<u>2 1/4 inch.</u>		<u>3 1/2 inch.</u>	
0.....	\$0.72	2.....	\$0.72	14.....	\$1.70	6.....	\$1.35	20.....	\$5.30	10.....	\$4.10
1.....	.72	3.....	.75	15.....	2.00	7.....	1.45	22.....	6.10	11.....	4.20
2.....	.72	4.....	.78	16.....	2.50	8.....	1.50	24.....	6.90	12.....	4.30
3.....	.72	5.....	.82	17.....	2.70	9.....	1.55	<u>2 1/2 inch.</u>		13.....	4.40
4.....	.72	6.....	.85	18.....	2.80	10.....	1.60	8.....	\$2.20	14.....	4.50
<u>3/8 inch.</u>		7.....	.90	20.....	3.50	11.....	1.70	9.....	2.30	15.....	4.75
0.....	\$0.72	8.....	.95	<u>1 1/2 inch.</u>		12.....	1.80	10.....	2.40	16.....	4.95
1.....	.72	9.....	1.00	4.....	\$0.82	13.....	2.00	11.....	2.50	17.....	5.40
2.....	.72	10.....	1.10	5.....	.98	14.....	2.25	12.....	2.60	18.....	6.15
3.....	.72	11.....	1.15	6.....	1.05	15.....	2.60	13.....	2.70	20.....	7.30
4.....	.72	12.....	1.25	7.....	1.10	16.....	2.90	14.....	2.90	22.....	8.70
5.....	.75	13.....	1.35	8.....	1.15	17.....	3.50	15.....	3.30	24.....	10.20
6.....	.78	14.....	1.50	9.....	1.20	18.....	4.00	16.....	3.65	26.....	12.00
7.....	.82	15.....	1.65	10.....	1.30	20.....	4.50	17.....	4.20	<u>4 inch.</u>	
8.....	.88	16.....	1.80	11.....	1.40	22.....	5.20	18.....	4.70	12.....	\$5.40
9.....	.94	<u>3/4 inch.</u>		12.....	1.55	24.....	6.00	20.....	5.80	14.....	5.90
<u>1/2 inch.</u>		2.....	\$0.74	13.....	1.70	<u>2 inch.</u>		22.....	6.70	16.....	6.50
1.....	\$0.72	3.....	.78	14.....	1.90	6.....	\$1.50	24.....	7.50	18.....	7.60
2.....	.72	4.....	.82	15.....	2.15	7.....	1.55	<u>2 1/2 inch.</u>		20.....	8.60
3.....	.72	5.....	.85	16.....	2.50	8.....	1.60	10.....	\$2.90	22.....	9.70
4.....	.75	6.....	.90	17.....	2.75	9.....	1.65	11.....	3.00	24.....	11.20
5.....	.78	7.....	.94	18.....	3.30	10.....	1.75	12.....	3.10	26.....	14.00
6.....	.80	8.....	1.00	20.....	4.00	11.....	1.85	13.....	3.20	<u>4 1/2 inch.</u>	
7.....	.84	9.....	1.05	22.....	4.80	12.....	2.00	14.....	3.30	16.....	\$8.15
8.....	.90	10.....	1.15	24.....	5.40	13.....	2.20	15.....	3.60	18.....	9.15
9.....	.96	11.....	1.25	<u>1 1/2 inch.</u>		14.....	2.45	16.....	3.90	20.....	9.85
10.....	1.05	12.....	1.35	4.....	\$1.05	15.....	2.75	17.....	4.50	22.....	11.20
11.....	1.10	13.....	1.45	5.....	1.10	16.....	3.10	18.....	5.00	24.....	13.50
12.....	1.20	14.....	1.55	6.....	1.15	17.....	3.70	20.....	6.10	26.....	16.00
<u>5/8 inch.</u>		15.....	1.75	7.....	1.20	18.....	4.20	22.....	7.20	<u>5 inch.</u>	
1.....	\$0.72	16.....	2.00	8.....	1.30	20.....	4.80	24.....	8.50	18.....	\$11.00
2.....	.72	<u>1 inch.</u>		9.....	1.35	22.....	5.50	<u>3 inch.</u>		20.....	11.50
3.....	.72	3.....	\$0.80	10.....	1.40	24.....	6.40	10.....	\$3.15	22.....	13.00
4.....	.75	4.....	.84	11.....	1.50	<u>2 1/4 inch.</u>		11.....	3.20	24.....	15.00
5.....	.78	5.....	.87	12.....	1.65	8.....	\$1.75	12.....	3.30	26.....	18.00
6.....	.82	6.....	.92	13.....	1.80	9.....	1.85	13.....	3.40	28.....	21.00
7.....	.86	7.....	.98	14.....	2.00	10.....	1.95	14.....	3.50	<u>6 inch.</u>	
8.....	.92	8.....	1.05	15.....	2.35	11.....	2.05	15.....	3.80	20.....	\$16.00
9.....	.98	9.....	1.10	16.....	2.80	12.....	2.20	16.....	4.20	22.....	18.00
10.....	1.07	10.....	1.20	17.....	3.20	13.....	2.25	17.....	4.80	24.....	20.00
11.....	1.12	11.....	1.30	18.....	3.80	14.....	2.65	18.....	5.50	26.....	23.00
12.....	1.20	12.....	1.40	20.....	4.30	15.....	3.10	20.....	6.50	28.....	27.00
13.....	1.25	13.....	1.60	22.....	5.10	16.....	3.50	22.....	7.50	30.....	30.50
14.....	1.30	<u>1 1/4 inch.</u>		24.....	5.90	17.....	3.85	24.....	8.70		
		<u>1 1/2 inch.</u>				18.....	4.55	26.....	10.50		

PRICE LIST OF BRASS SCREWS.

Flat and Round Head. Adopted July 22d, 1903.

Gross in a Package	No. Per Gro.		Gross in a Package	No. Per Gro.		Gross in a Package	No. Per Gro.		Gross in a Package	No. Per Gro.					
	$\frac{1}{4}$ inch.			$\frac{3}{8}$ inch.			$\frac{1}{2}$ inch.			$\frac{3}{4}$ inch.					
10	± 0	\$0.84	10	± 2	\$1.12	10	9	\$2.80	5	± 15	\$7.60				
	± 1	.84		± 3	1.18		10	10		3.15	± 16	8.35			
	± 2	.88		± 4	1.25		10	11		3.65	± 17	9.15			
	± 3	.92		± 5	1.40		10	12		4.10	± 18	10.85			
	± 4	.97		± 6	1.55		5	± 13		4.55	± 20	12.65			
$\frac{3}{8}$ inch.		$\frac{1}{2}$ inch.		$\frac{3}{4}$ inch.		$1\frac{1}{4}$ inch.		$1\frac{1}{2}$ inch.		$1\frac{3}{4}$ inch.					
10	± 0	\$0.84	10	± 7	1.75	10	± 14	5.05	10	± 6	\$ 3.95	1	± 13	8.80	
	± 1	.87		± 8	2.00		5	± 15		5.60	± 7		4.00	± 14	9.80
	± 2	.92		± 9	2.30		5	± 16		6.65	± 8		4.10	± 15	10.75
	± 3	.97		± 10	2.65		5	± 18		7.40	± 9		4.20	± 16	11.90
	± 4	1.04		± 11	3.00		$1\frac{3}{4}$ inch.				± 10		4.70	± 17	13.00
10	± 5	1.12	10	± 12	3.35	10	± 3	\$2.10	5	± 11	5.35	1	± 18	15.40	
	± 6	1.20		± 13	3.70		± 4	2.20		± 12	6.05		± 20	18.00	
	± 7	1.35		± 14	4.10		± 5	2.25		± 13	6.70		± 22	20.95	
				± 15	4.55		± 6	2.35		± 14	7.35		$2\frac{1}{2}$ inch.		
				± 16	5.05		± 7	2.45		± 15	8.65		± 10	\$ 9.50	
10	$\frac{1}{2}$ inch.		10	$\frac{3}{4}$ inch.		10	± 8	2.85	5	± 16	9.50	5	± 11	9.60	
	± 1	\$0.92		± 2	\$1.40		± 9	3.20		± 17	10.45		± 12	9.70	
	± 2	.96		± 3	1.50		± 10	3.50		± 18	12.40		± 13	9.85	
	± 3	1.02		± 4	1.55		± 11	4.10		± 20	14.50		± 14	10.75	
	± 4	1.08		± 5	1.60		± 12	4.65		± 22	16.85		± 15	11.85	
10	± 5	1.20	10	± 6	1.65	5	± 13	5.35	5	± 8	5.25	1	± 16	13.00	
	± 6	1.30		± 7	1.90		± 14	5.85		± 9	5.30		± 17	14.30	
	± 7	1.45		± 8	2.20		± 15	6.55		± 10	5.40		± 18	16.95	
	± 8	1.65		± 9	2.50		± 16	7.20		± 11	6.15		± 20	19.85	
	± 9	1.90		± 10	2.90		± 17	7.85		± 12	6.85		± 22	23.00	
10	± 10	2.15	10	± 11	3.35	5	± 18	9.35	5	± 13	7.55	1	± 24	25.50	
				± 12	3.70		± 20	10.45		± 14	8.45		3 inch.		
	$\frac{3}{4}$ inch.			± 13	4.10		$1\frac{1}{2}$ inch.			± 15	9.75		± 10	\$13.70	
	± 2	\$1.00		± 14	4.55		± 4	\$2.95		± 16	10.70		± 11	13.85	
	± 3	1.08		± 15	5.05		± 5	3.05		± 17	11.70		± 12	14.00	
10	± 4	1.15	10	± 16	5.60	5	± 6	3.10	5	± 18	13.90	1	± 13	14.10	
	± 5	1.30		1 inch.			± 7	3.20		± 20	16.30		± 14	14.30	
	± 6	1.40		± 3	\$1.65		± 8	3.30		± 22	18.90		± 15	14.60	
	± 7	1.60		± 4	1.70		± 9	3.65		± 24	21.00		± 16	15.40	
	± 8	1.85		± 5	1.75		± 10	4.25		$3\frac{1}{2}$ inch.			± 18	19.95	
10	± 9	2.10	10	± 6	1.80	5	± 11	4.65	1	± 19	15.70	1	± 20	23.40	
	± 10	2.40		± 7	2.10		± 12	5.35		± 20	16.30		± 22	27.10	
	± 11	2.65		± 8	2.45		± 13	5.95		± 22	18.90		± 24	31.15	
	± 12	3.00					± 14	6.65		± 24	21.00		± 26	35.85	

Approximate Weight per Gross of the Largest Selling Sizes of Wood Screws.

Inches.	No.	Pounds.	Inches.	No.	Pounds.	Inches.	No.	Pounds.	Inches.	No.	Pounds.	Inches.	No.	Pounds.
1/4	2	1/16	3/8	12	1	1 1/4	14	2	2	10	1 1/4	3	14	4 1/4
5/16	3	1/8	1/2	8	3/4	1 1/2	10	1 1/8	2	16	3 1/4	3 1/2	16	6
3/8	4	1/5	5/8	6	1 1/2	1 3/4	16	2 1/4	2 1/4	12	2 3/4	4	20	10
7/16	5	3/4	1	9	3/2	2	8	1 1/16	2 1/2	8	3 1/4	5	24	16 1/2
1/2	8	3/2	1 1/4	9	1	2 1/4	14	2 1/2	3 1/2	14	3 1/4	6	30	30

NOTE.—The above weights are of very Good Sellers; for weights of sizes not mentioned above, figure a basis of nearest size given.

IRON SCREWS.

Round Head, Blued.



<u>3/8 inch.</u>		<u>1 inch.</u>		<u>1 1/4 inch.</u>	
Nos.	Per Gross	Nos.	Per Gross	Nos.	Per Gross
3	\$.072	5	\$.087	7	\$.145
<u>1/2 inch.</u>		6	.92	8	1.50
3	.72	7	.98	9	1.55
6	.80	8	1.05	10	1.60
<u>5/8 inch.</u>		9	1.10	11	1.70
4	.75	10	1.20	12	1.80
5	.78	11	1.30	14	2.25
6	.82	12	1.40	<u>2 inch.</u>	
<u>3/4 inch.</u>		<u>1 1/2 inch.</u>		8	1.60
5	.82	6	1.05	10	1.75
6	.85	7	1.10	12	2.00
7	.90	8	1.15	14	2.45
8	.95	9	1.20	<u>2 1/4 inch.</u>	
9	1.00	10	1.30	8	2.20
10	1.10	11	1.40	10	2.40
<u>7/8 inch.</u>		12	1.55	12	2.60
6	.90	14	1.90	14	2.90
7	.94	<u>1 3/4 inch.</u>		16	3.65
8	1.00	7	1.20		
9	1.05	8	1.30		
10	1.15	9	1.35		
		10	1.40		
		11	1.50		
		12	1.65		
		14	2.00		

Round Head, Nickel Plated.



<u>1/2 inch.</u>		<u>5/8 inch.</u>		<u>3/4 inch.</u>	
Nos.	Per Gross	Nos.	Per Gross	Nos.	Per Gross
4	\$.075	6	\$.090	8	\$.130
5	.78	7	.94	9	1.35
6	.80	8	1.00	10	1.40
<u>3/4 inch.</u>		9	1.05	11	1.50
4	.75	10	1.15	12	1.65
5	.78	<u>1 inch.</u>		<u>1 1/4 inch.</u>	
6	.82	6	.92	8	1.50
7	.86	7	.98	9	1.55
8	.92	8	1.05	10	1.60
<u>3/4 inch.</u>		9	1.10	11	1.70
5	.82	10	1.20	12	1.80
6	.85	<u>1 1/4 inch.</u>		<u>2 inch.</u>	
7	.90	7	1.10	9	1.65
8	.95	8	1.15	10	1.75
9	1.00	9	1.20	11	1.85
10	1.10	10	1.30	12	2.00
		11	1.40	14	2.45
		12	1.55	16	3.10

BRASS SCREWS.

Oval Head.



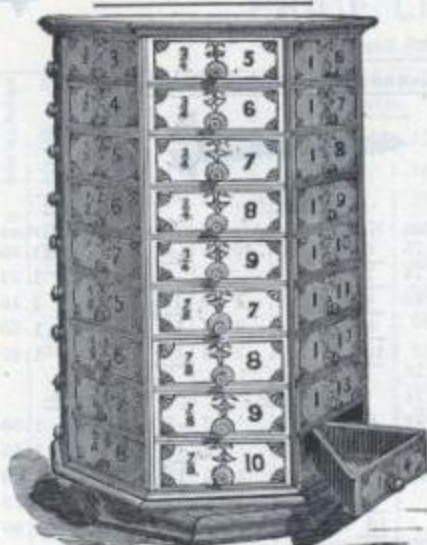
Prices Adopted July 22d, 1903.

<u>3/8 inch.</u>		<u>1 inch.</u>		<u>1 1/4 inch.</u>	
Nos.	Per Gross	Nos.	Per Gross	Nos.	Per Gross
6	\$.085	7	\$.098	10	\$.140
7	.90	8	1.05	11	1.50
8	.95	9	1.10	12	1.65
9	1.00	10	1.20	13	1.80
		11	1.30		
<u>7/8 inch.</u>		<u>1 1/2 inch.</u>		<u>2 inch.</u>	
6	\$.090	8	1.15	10	1.70
7	.94	9	1.20	12	2.00
8	1.00	10	1.30	14	2.45
9	1.05	11	1.40		
10	1.15	12	1.55		

<u>1/2 inch.</u>		<u>5/8 inch.</u>		<u>3/4 inch.</u>	
Nos.	Per Gross	Nos.	Per Gross	Nos.	Per Gross
2	\$.096	6	\$.165	8	\$.330
4	1.08	8	2.20	10	4.25
5	1.20	10	2.90	12	5.35
6	1.30	<u>1 inch.</u>		<u>1 1/4 inch.</u>	
8	1.65	5	1.75	8	4.10
<u>3/4 inch.</u>		6	1.80	10	4.70
4	1.15	8	2.45	12	6.05
5	1.30	10	3.15	14	7.35
6	1.40	12	4.10	<u>2 inch.</u>	
8	1.85	<u>1 1/4 inch.</u>		8	5.25
<u>3/4 inch.</u>		5	2.25	10	5.40
6	1.55	6	2.35	12	6.85
8	2.00	8	2.85	14	8.45
10	2.65	10	3.50	16	10.70
		12	4.65		
		14	5.85		
		16	7.20		

One Gross in a Package.

*SCREW CASES.



AMERICAN.

Octagon Shape; Made of Selected White Pine, Varnished; Metal Drawers, with Wood Fronts; White Porcelain Knob on each Drawer; Top part revolves on Base.

The Drawers are all provided with Stops to prevent their removal from the Case. Each Drawer holds a Package of Bolts or Screws of the Size and Number indicated on the front of the Drawer.

- Each
- ±No. 1—12 DRAWERS; Height 34 inches, Width 21 inches, Depth 21 inches; Weight each about 80 lbs.....\$25.00
- ±No. 2—80 DRAWERS; Height 36 inches, Width 21 inches, Depth 21 inches; Weight each about 85 lbs.....30.00
- ±No. 3—88 DRAWERS; Height 40 inches, Width 25 inches, Depth 25 inches; Weight each about 90 inches.....35.00
- ±No. 4—96 DRAWERS; Height 42 inches, Width 25 inches, Depth 25 inches; Weight each about 90 lbs.....40.00

No. 1 SCREW CASE Contains Drawers labeled for following sizes of Screws:

- | | |
|-------------------------------------|------------------------------------|
| 1/4-in. x 3, 4, 5, 6, 7, | 1 1/2-in. x 8, 9, 10, 11, 12, 13, |
| 1/2-in. x 5, 6, 7, 8, | 14, 15, 16, |
| 3/4-in. x 5, 6, 7, 8, 9, | 1 1/2-in. x 9, 10, 11, 12, 13, 14, |
| 1-in. x 7, 8, 9, 10, | 15, 16, 17, |
| 1 1/4-in. x 6, 7, 8, 9, 10, 11, 12, | 2-in. x 10, 11, 12, 13, 14, 15, |
| 13, 14, | 16, 17, 18, |
| 1 1/2-in. x 7, 8, 9, 10, 11, 12, | 2 1/2-in. x 12, 13, 14, 15, 16, |
| 13, 14, 15, | 3-in. x 16, 18, 20, 22, |

No. 2 SCREW CASE Contains Drawers labeled for following sizes of Screws:

- | | |
|--------------------------------------|------------------------------------|
| 1/4-in. x 2, 3, 4, | 1 1/2-in. x 8, 9, 10, 11, 12, 13, |
| 1/2-in. x 3, 4, 5, 6, 7, | 14, 15, 16, |
| 3/4-in. x 4, 5, 6, 7, 8, | 1 1/2-in. x 9, 10, 11, 12, 13, 14, |
| 1-in. x 4, 5, 6, 7, 8, 9, 10, | 15, 16, 17, |
| 1 1/4-in. x 6, 7, 8, 9, 10, 11, | 2-in. x 10, 11, 12, 13, 14, 15, |
| 13, 14, | 16, 17, 18, |
| 1 1/2-in. x 7, 8, 9, 10, 11, 12, 13, | 2 1/2-in. x 12, 13, 14, 15, 16, |
| 14, 15, | 3-in. x 16, 18, 20, 22, |

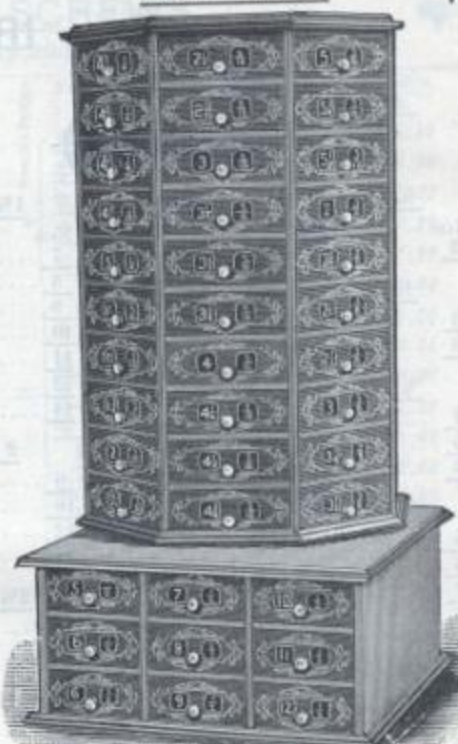
No. 3 SCREW CASE Contains Drawers labeled for following sizes of Screws:

- | | |
|--------------------------------------|------------------------------------|
| 1/4-in. x 1, 2, | 1 1/2-in. x 8, 9, 10, 11, 12, 13, |
| 1/2-in. x 2, 3, 4, 5, | 14, 15, 16, |
| 3/4-in. x 3, 4, 5, 6, 7, | 1 1/2-in. x 9, 10, 11, 12, 13, 14, |
| 1-in. x 4, 5, 6, 7, 8, 9, | 15, 16, 17, 18, |
| 1 1/4-in. x 4, 5, 6, 7, 8, 9, 10, | 2-in. x 10, 11, 12, 13, 14, 15, |
| 1 1/2-in. x 6, 7, 8, 9, 10, 11, 12, | 16, 17, 18, |
| 13, 14, 15, | 2 1/2-in. x 12, 13, 14, 15, 16, |
| 1 1/2-in. x 7, 8, 9, 10, 11, 12, 13, | 3-in. x 16, 18, 20, 22, |
| 14, 15, 16, | |

No. 4 SCREW CASE Contains Drawers labeled for following sizes of Screws:

- | | |
|-------------------------------------|------------------------------------|
| 1/4-in. x 1, 2, | 1 1/2-in. x 8, 9, 10, 11, 12, 13, |
| 1/2-in. x 2, 3, 4, 5, 6, | 14, 15, 16, |
| 3/4-in. x 3, 4, 5, 6, 7, 8, | 1 1/2-in. x 9, 10, 11, 12, 13, 14, |
| 1-in. x 4, 5, 6, 7, 8, 9, 10, 11, | 15, 16, 17, |
| 1 1/4-in. x 4, 5, 6, 7, 8, 9, 10, | 2-in. x 10, 11, 12, 13, 14, 15, |
| 11, 12, | 16, 17, 18, |
| 1 1/2-in. x 6, 7, 8, 9, 10, 11, 12, | 2 1/2-in. x 12, 13, 14, 15, 16, |
| 1 1/2-in. x 6, 7, 8, 9, 10, 11, 12, | 3-in. x 16, 18, 20, 22, |
| 13, 14, 15, 16, | 3 1/2-in. x 16, 18, 20, |
| 1 1/4-in. x 7, 8, 9, 10, 11, 12, | |
| 13, 14, 15, | |

*BOLT CASES.



- Each
- ±No. 1—98 DRAWERS; Height of Base 15 inches; Height over all 60 inches; Size of Base 31x31 inches; Size of Top 30x30 inches; Weight each about 250 lbs.....\$50.00

- ±No. 2—104 DRAWERS; Height of Base 20 inches; Height over all 65 inches; Size of Base 31x31 inches; Size of Top 30x30 inches; Weight each about 300 lbs.....55.00

No. 1 BOLT CASE Contains Drawers labeled for following sizes of Bolts:

Tire Bolts.

- 1/16-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3.
- 1/8-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3.
- 1/4-in. x 2, 2 1/4, 2 1/2.

Carriage Bolts.

- 1/4-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4.
- 5/16-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4.
- 3/8-in. x 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 5, 6.
- 7/16-in. x 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 5, 6, 6 1/2, 7, 8, 9, 10.
- 1/2-in. x 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 5, 5 1/2, 6, 6 1/2, 7, 8, 9, 10, 11, 12.

No. 2 BOLT CASE Contains Drawers labeled for following sizes of Bolts:

Tire Bolts.

- 1/16-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3.
- 1/8-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3.
- 1/4-in. x 2, 2 1/4, 2 1/2.

Carriage Bolts.

- 1/4-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4.
- 5/16-in. x 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4.
- 3/8-in. x 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 5, 6.
- 7/16-in. x 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 5, 5 1/2, 6, 6 1/2, 7, 7 1/2, 8, 8 1/2.
- 1/2-in. x 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 5, 5 1/2, 6, 6 1/2, 7, 7 1/2, 8, 8 1/2.
- 9, 9 1/2, 10, 11, 12.

One in a Crate.

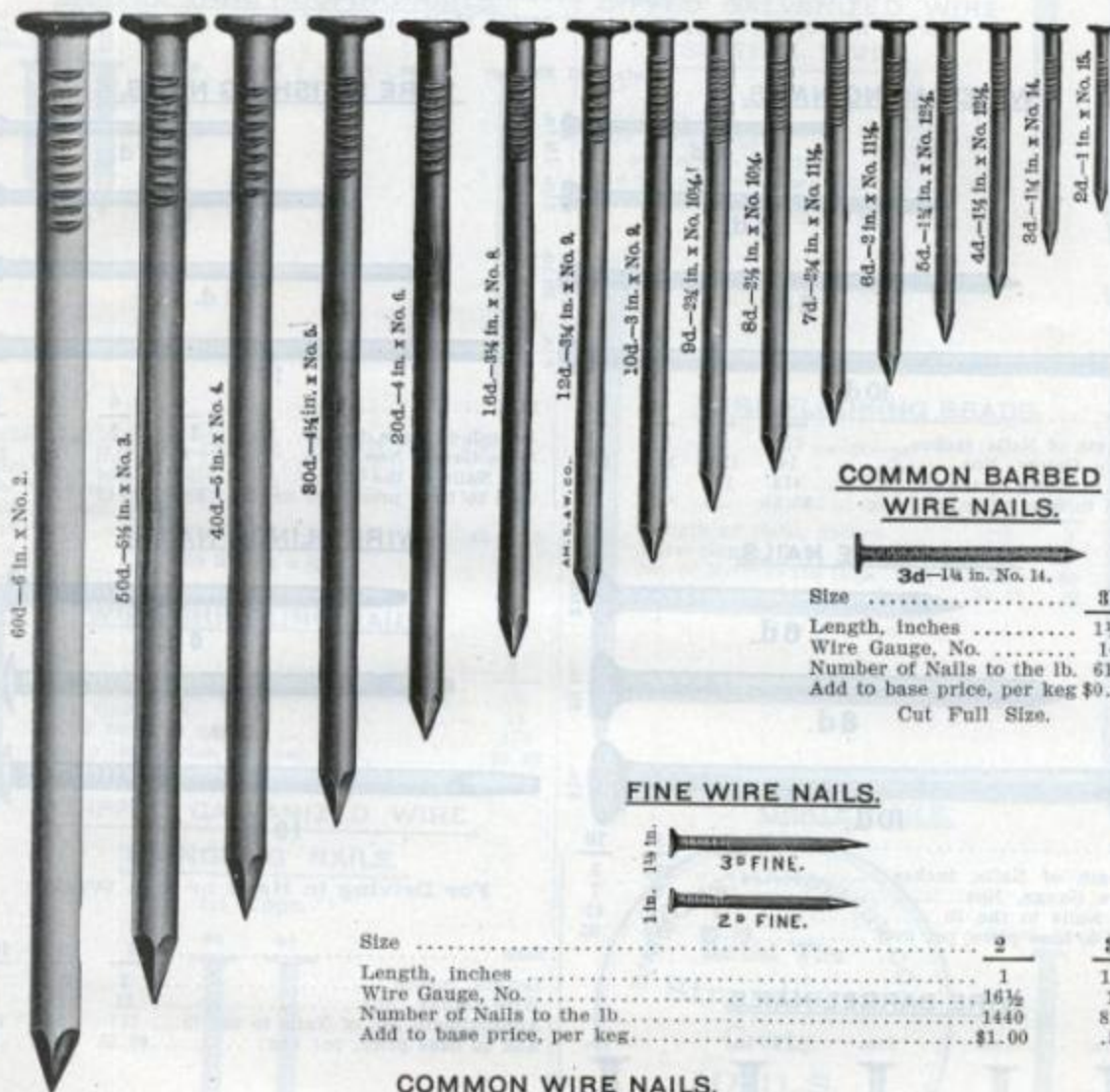
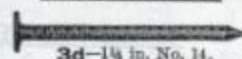
-1587-

STANDARD WIRE NAILS.

Kegs Contain 100 Pounds of Nails, Exclusive of Keg.

Price List Adopted December 1st, 1896.

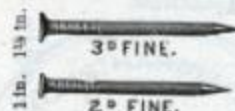
We do not carry any Standard Wire Nails in Half Kegs.

COMMON BARBED
WIRE NAILS.

3d-1 1/4 in. No. 14.

Size	3
Length, inches	1 1/4
Wire Gauge, No.	14
Number of Nails to the lb.	615
Add to base price, per keg \$0.60	
Cut Full Size.	

FINE WIRE NAILS.



3° FINE.

2° FINE.

Size	2	3
Length, inches	1	1 1/4
Wire Gauge, No.	16 1/2	15
Number of Nails to the lb.	1440	810
Add to base price, per keg	\$1.00	.50

COMMON WIRE NAILS.

Size	2	3	4	5	6	7	8
Length, inches	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2
Wire Gauge, No.	15	14	12 1/2	12 1/2	11 1/2	11 1/2	10 1/4
Number of Nails to the lb.	900	615	322	254	200	154	106
Add to base price, per keg	\$0.70	.45	.30	.30	.20	.20	.10

Size	9	10	12	16	20	30	40	50	60
Length, inches	2 3/4	3	3 1/4	3 1/2	4	4 1/2	5	5 1/2	6
Wire Gauge, No.	10 1/4	9	8	8	6	5	4	3	2
Number of Nails to the lb.	85	74	57	46	29	23	17	14	11
Add to base price, per keg	\$0.10	.05	.05	.05	Base.	Base.	Base.	Base.	Base.

Cuts Full Size.



STANDARD WIRE NAILS.

In Kegs.

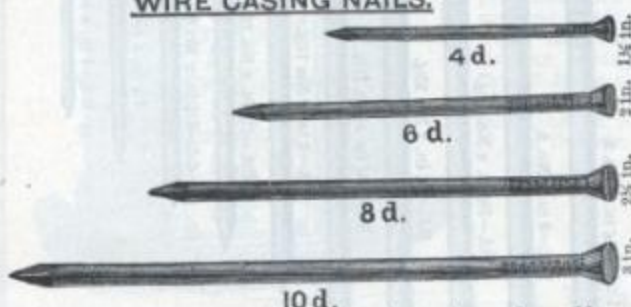
Kegs contain 100 pounds of Nails exclusive of Keg.

Price List Adopted December 1st, 1896.

We do not carry any Standard Wire Nails in Half Kegs.

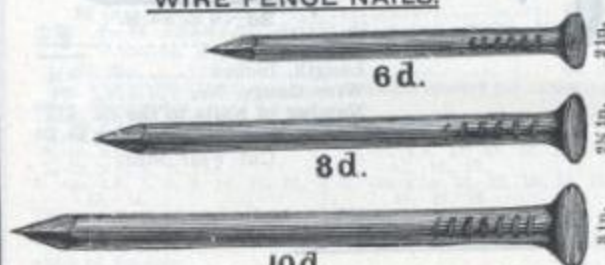
WIRE CASING NAILS.

Cuts Full Size.



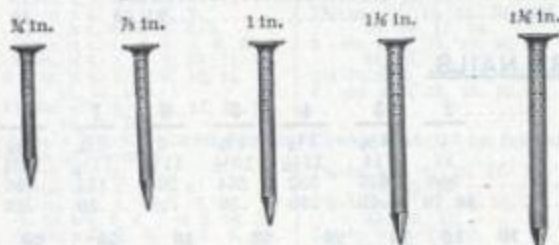
Size	4	6	8	10
Length of Nails, inches.....	1½	2	2½	3
Wire Gauge, Nos.....	14	12½	11½	10½
No. of Nails to the lb.....	473	180	112	90
Add to base price, per keg.....	\$0.50	.35	.25	.15

WIRE FENCE NAILS.



Size	6	8	10
Length of Nails, inches.....	2	2½	3
Wire Gauge, Nos.....	10	9	7
No. Nails to the lb.....	114	74	42
Add to base price, per keg.....	\$0.20	.10	.05

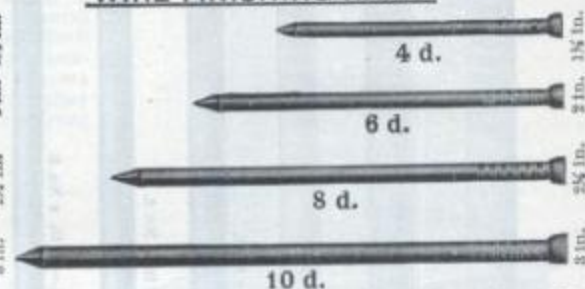
WIRE BARREL NAILS.



Inches	¾	⅞	1	1¼	1½
Wire Gauge, Nos.....	15½	14½	14½	14½	13
No. Nails to the lb.....	1270	975	784	700	542
Add to base price, per keg.....	\$1.00	.85	.70	.60	.50

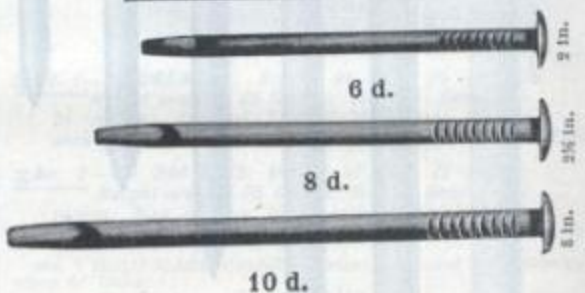
Cuts Full Size.

WIRE FINISHING NAILS.



Size	4	6	8	10
Length of Nails, inches.....	1½	2	2½	3
Wire Gauge, Nos.....	15	13½	12½	11½
No. Nails to the lb.....	584	300	190	134
Add to base price, per keg.....	\$0.65	.45	.35	.25

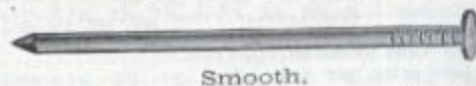
WIRE CLINCH NAILS.



For Driving in Hard or Soft Wood.

Size	6	8	10
Length, inches.....	2	2½	3
Wire Gauge, Nos.....	11	10	9
Approximate No. of Nails to the lb...	157	99	69
Add to base price, per keg.....	\$0.55	.45	.35

WIRE BOX NAILS.



Size	4	5	6	7	8	10
Length, inches.....	1½	1¾	2	2½	2¾	3
Wire Gauge, Nos.....	14	14	12½	12½	11½	10½
Approximate No. of Nails to the lb.....	473	406	236	210	145	94
Add to base price, keg.....	\$0.50	.50	.35	.35	.25	.15

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STANDARD WIRE NAILS.

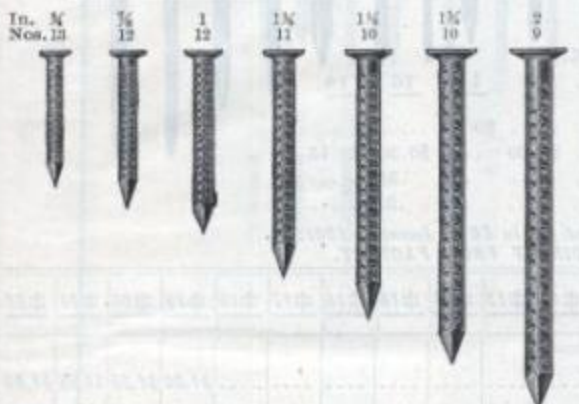
In Kegs.

Kegs contain 100 pounds of Nails exclusive of Keg.

Price List Adopted December 1st, 1896.

We do not carry any Standard Wire Nails in Half Kegs.

BARBED WIRE ROOFING NAILS.



Inches	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2
Wire Gauge, Nos.	13	12	12	11	10	10	9
No. of Nails to lb.	648	413	384	231	154	135	99
Add to base price, per keg	\$0.75	.65	.60	.55	.45	.45	.35

100 lbs. in a Keg.

WIRE SHINGLING NAILS.

Size	3
Length, inches	1 1/4
Wire Gauge, No.	13
No. of Nails to the lb.	450
Add to Base price, per keg	\$0.45

100 lbs. in a Keg.

DIPPED GALVANIZED WIRE

SHINGLING NAILS.

In Kegs.



Size	3	4
Length, inches	1 1/4	1 1/2
Wire Gauge, No.	13	12
Approximate No. of Nails to the lb.	568	250
Add to base price, per keg	\$1.20	1.05

Cuts Full Size.

DIPPED GALVANIZED WIRE

SLATING NAILS.

Size	3	4
Length, inches	1 1/4	1 1/2
Wire Gauge, Nos.	10 1/2	10 1/2
No. of Nails to the lb.	190	160
Add to base price, per keg	\$1.60	1.40

100 lbs. in a Keg.



WIRE FLOORING BRADS.

In Kegs.

Size	8	10
Length of Nails, inches	2 1/2	3
Wire Gauge, Nos.	10	9
No. of Nails to the lb.	98	69
Add to base price, per keg	\$0.10	.05

100 lbs. in a Keg.



CRATE NAILS.



Showing Brand on Keg.

Strawberry Crate Nails.

Add to Base Price, Per Keg

S. H. CO.* Barbed Wire Nails, Large Head, 1 inch, 16 gauge, 100 lbs in a keg. \$1.15

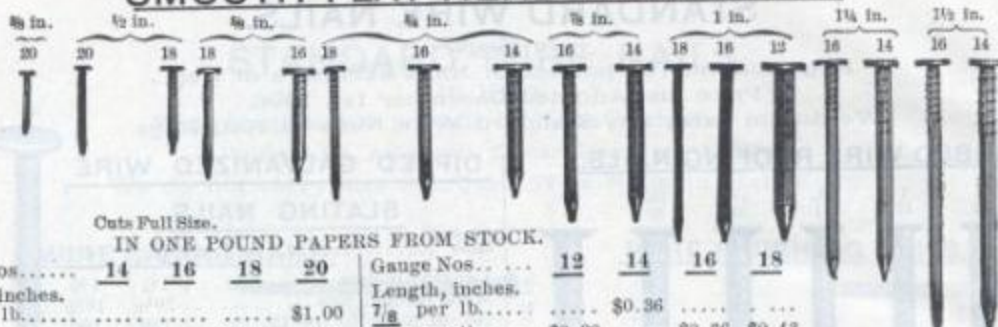
Suitable also for all Fruit and Vegetable Cases.

1 inch, No. 16.



In Kegs.

—1590—
SMOOTH FLAT HEAD WIRE NAILS.



Cuts Full Size.

IN ONE POUND PAPERS FROM STOCK.

Gauge Nos.	<u>14</u>	<u>16</u>	<u>18</u>	<u>20</u>	Gauge Nos.	<u>12</u>	<u>14</u>	<u>16</u>	<u>18</u>
Length, inches.					Length, inches.				
$\frac{3}{8}$ per lb.				\$1.00	$\frac{7}{8}$ per lb.		\$0.36		
$\frac{1}{2}$ per lb.			\$0.65	.85	$\frac{1}{2}$ per lb.	\$0.30		\$0.36	\$0.43
$\frac{5}{8}$ per lb.		\$0.50	.58		$\frac{1}{4}$ per lb. ....		.31	.34	
$\frac{3}{4}$ per lb.	\$0.38	.43	.52		$\frac{1}{8}$ per lb. ....		.30	.33	

‡Standard Price List Adopted and put in Effect January, 1901.
IN ONE POUND PAPERS DIRECT FROM FACTORY.

IN ONE POUND PAYING ONE																					
Gauge Nos.	±3	±4	±5	±6	±7	±8	±9	±10	±11	±12	±13	±14	±15	±16	±17	±18	±19	±20	±21	±22	
Length, in.	Per Pound.																				
± ¼																	\$1.00	\$1.25	\$1.55	\$1.90	
± ⅓																	.80	.90	1.00	1.25	
± ½													\$0.55	\$0.55	\$0.55	\$0.60	.65	.75	.85	1.00	
± ⅔										\$0.43	\$0.43	.43	.45	.50	.52	.58	.65	.75	.85	1.10	
± ¾								\$0.36	\$0.36	.36	.38	.38	.42	.43	.46	.52	.60	.70	.85	---	
± ⅞						\$0.33	\$0.33	.33	.33	.33	.34	.35	.36	.39	.43	.45	.56	.67	---	---	
±1					\$0.30	.30	.30	.30	.30	.30	.31	.32	.33	.36	.40	.43	.53	.64	---	---	
±1 ⅛					.30	.30	.30	.30	.30	.30	.31	.32	.32	.35	.40	.43	.53	---	---	---	
±1 ¼				\$0.29	.29	.29	.29	.29	.29	.29	.30	.31	.32	.34	.39	---	---	---	---	---	
±1 ½				.29	.29	.29	.29	.29	.29	.29	.30	.31	.32	.34	.39	---	---	---	---	---	
±1 ⅞				.29	.29	.29	.29	.29	.29	.29	.29	.30	.31	.33	.38	---	---	---	---	---	
±2	\$0.27	.27	.27	.27	.27	.27	.27	.27	.28	.28	.28	.29	.30	.35	---	---	---	---	---	---	
±2 ⅛	.27	.27	.27	.27	.27	.27	.27	.27	.28	.28	.28	.29	---	---	---	---	---	---	---	---	
±2 ¼	.26	.26	.26	.26	.26	.26	.26	.26	.27	.27	---	---	---	---	---	---	---	---	---	---	
±2 ½	.26	.26	.26	.26	.26	.26	.26	.26	.27	.27	---	---	---	---	---	---	---	---	---	---	
±3	.25	.25	.25	.25	.25	.25	.25	.25	.26	.27	---	---	---	---	---	---	---	---	---	---	
±3 ⅛	.25	.25	.25	.25	.25	.25	.25	.25	.26	.27	---	---	---	---	---	---	---	---	---	---	
±3 ¼	.25	.25	.25	.25	.25	.25	.25	.25	.26	---	---	---	---	---	---	---	---	---	---	---	
±4	.25	.25	.25	.25	.25	.25	.25	.25	.26	---	---	---	---	---	---	---	---	---	---	---	

±LIST EXTRAS—Subject to Discount.

Same Price as Above for 5 Pound Packages.
Same Price as Above for 10 Pound Packages.
Add to list 4 cents per pound for $\frac{1}{2}$ pound Paper Boxes.
Add to list 3 cents per pound for $\frac{1}{4}$ pound Paper Boxes.
Add to list 2 cents per pound for Barbing.
Add to list 2 cents per pound for Annealing.
Add to list 2 cents per pound for Cone Heads, Special Heads
and Headless.

Add to list 2 cents per pound for Needle Points and Special Points.

For Nails combining several specialties, add as above for each.

For sizes not appearing on the list, use the list prices for
in the desired Gauge in the nearest shorter length.

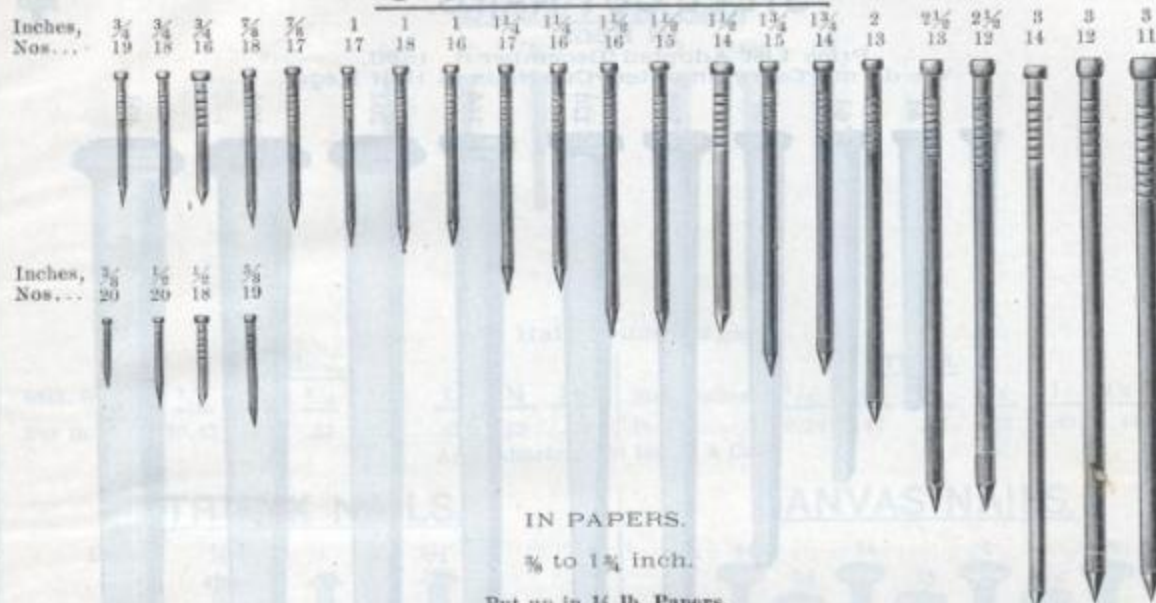
Nails heavier than listed, at special net prices, according to quantity.

±REBATES FROM LIST PRICES.

Rebate for 25 and 50 pound Boxes, 1 cent per pound.

Rebate for Nails in 100 pound Kegs, 2 cents per pound.

-1592-
STEEL WIRE BRADS.



IN PAPERS.

 $\frac{3}{8}$ to $1\frac{1}{4}$ inch.Put up in $\frac{1}{4}$ lb. Papers.

Size, inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{7}{8}$	1	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Wire Gauge, Nos.	20	20	19	18	18	17	18	16	16	15	15
Approximate number Brads to the lb.	7500	4267	2758	2364	1781	2069	1143	913	584	500	
Per dozen papers	\$3.24	2.79	2.19	1.80	1.59	1.53	1.32	1.26	1.23	1.14	

 $1\frac{1}{4}$ to 2 inch.Put up in $\frac{1}{2}$ lb. Papers.

Size, inches	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
Wire Gauge, Nos.	16	15	14	13
Approximate number Brads to the lb.	913	584	406	268
Per dozen papers	\$2.28	2.10	1.98	1.92

One Dozen Papers in a Package.

Put up in One Pound Papers.

Size, inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{7}{8}$	1	1	1	$1\frac{1}{4}$	$1\frac{1}{4}$	$1\frac{1}{2}$
Wire Gauge, Nos.	20	19	19	18	18	17	18	17	16	17	16	16
Approximate number Brads to the lb.	7500	4267	3556	2758	2364	1781	2069	1558	1143	1246	913	761
Per lb.	\$0.85	.65	.60	.52	.45	.43	.43	.40	.36	.39	.34	.33
Size, inches	$1\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{3}{4}$	2	2	2	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3
Wire Gauge, Nos.	15	15	14	14	16	13	15	13	13	12	12	14
Approximate number Brads to the lb.	584	500	406	350	385	268	235	214	164	150	137	105
Per lb.	\$0.31	.30	.29	.29	.35	.28	.30	.28	.27	.26	.26	.25

IN BULK.

Size, inches	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{7}{8}$	1	1	1	$1\frac{1}{4}$	$1\frac{1}{4}$
Wire Gauge, Nos.	20	18	19	19	18	16	18	17	18	17	16	17	16
Approximate number Brads to the lb.	7500	7200	4267	3556	2758	2600	2364	1781	2069	1558	1143	1246	913
Per lb.	\$0.84	.64	.64	.59	.51	.42	.44	.42	.42	.39	.35	.38	.33
Size, inches	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{3}{4}$	2	2	$2\frac{1}{2}$	$2\frac{1}{2}$	3	3	3	3
Wire Gauge, Nos.	16	15	14	15	14	14	13	13	12	14	12	11	11
Approximate number Brads to the lb.	761	584	500	500	406	350	268	214	164	150	137	105	105
Per lb.	\$0.32	.30	.29	.29	.28	.28	.27	.27	.26	.28	.26	.25	.25

Twenty-five Pounds in a Wood Box.

Cuts Full Size.

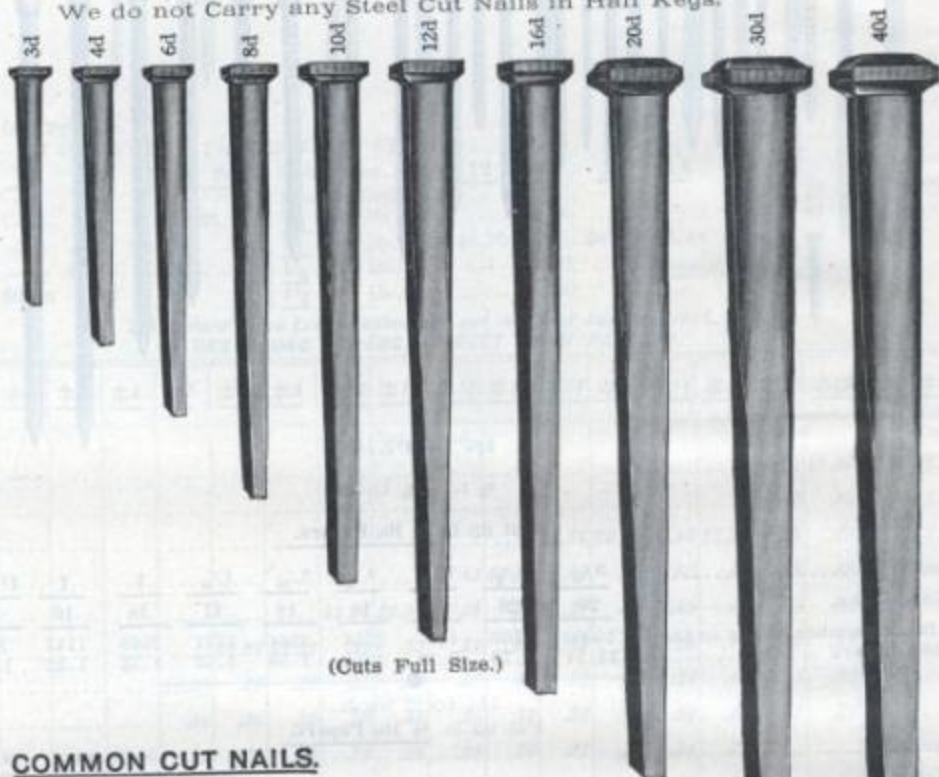
-1593-

STEEL CUT NAILS.

IN KEGS.

Price List Adopted December 1, 1896.

We do not Carry any Steel Cut Nails in Half Kegs.



(Cuts Full Size.)

COMMON CUT NAILS.

Sizes.....	3d	4d	6d	8d	10d	12d	16d	20d	30d	40d
Length, inches	1½	1½	2	2½	3	3½	3½	4	4½	5
Number Nails to the lb....	464	296	175	88	60	48	36	24	17	14
Add to base price, per keg \$0.45	.30	.20	.10	.05	.05	.05	.05	Base.	Base.	Base.

IRON CUT SHINGLE NAILS.



Edge Grip, Large Heads.

Sizes	3d	3½d	4d
Length of Nails, inches.....	1½	1½	1½
Number of Nails to the lb.....	360	270	200
Add to base price, per keg.....	\$0.45	.40	.30

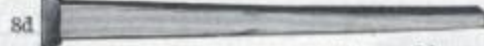
STEEL CUT CLINCH NAILS.



Sizes	6d	8d	10d
Length, inches	2	2½	3
Number of Nails to the lb.....	100	72	54
Add to base price, per keg.....	\$0.65	.55	.45

100 lbs. in a Keg.

STEEL CUT CASING NAILS.



Sizes	6d	8d	10d
Length, inches	2	2½	3
Number of Nails to the lb.....	224	130	91
Add to base price, per keg.....	\$0.35	.25	.15

100 lbs. in a Keg.

HINGE NAILS.



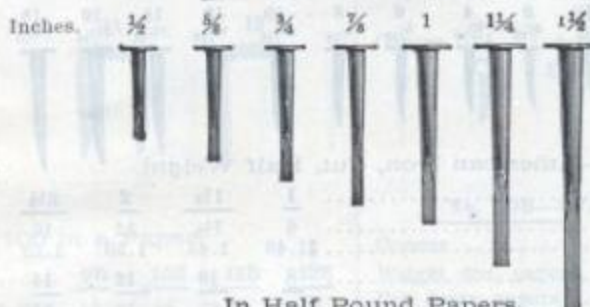
Large Head.

Made from Specially Annealed Steel.
Specially adapted for use with Strap and T Hinges.
No. 25—COUNTERSUNK HEAD.

Size, inches	2	2½	3
Per box of 25 lbs.....	\$.....

SOLD ONLY IN FULL BOXES.

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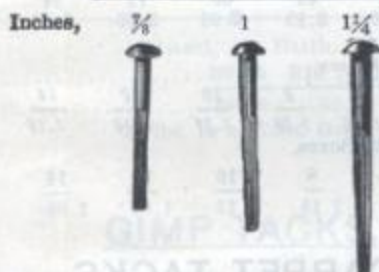
CLOUT NAILS.

In Half Pound Papers.

Blued.							Tinned.								
Size, inches..	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	Size, inches..	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Per lb.	\$0.43	.36	.33	.31	.29	.29	.29	Per lb.	\$0.54	.47	.44	.42	.40	.40	.40

Approximately 100 lbs. in a Case.

Approximately 100 lbs. in a Case.

TRUNK NAILS.

In One Pound Papers.

Blued.				Tinned.			
Size, inches	3/8	1	1 1/4	Size, inches	3/8	1	1 1/4
Per lb.				Per lb.			

Approximately 100 lbs. in a Case.

CANVAS NAILS.

BOLSTER'S*, Japanned.

Size, inches..	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2
Per lb.	\$0.48	.41	.38	.36	.35	.35	.35

Are used for fastening the Canvas to the Slats on Grain Binders.

One-half Pound in a Paper.

ESCUTCHEON PINS.

BRASS.




Size, inches	1/2	1/2	1/2	5/8	5/8	5/8	3/4	3/4	3/4
Nos.	20	19	18	17	16	15	14	13	12
Per lb.	\$1.20	1.10	.82	.94	.87	.80	.85	.78	.76
Size, inches	3/4	3/4	7/8	7/8	7/8	7/8	1	1	1
Nos.	14	13	12	11	10	9	8	7	6
Per lb.	\$0.75	.74	.76	.75	.74	.73	.75	.73	.71

One Pound in a Cardboard Box.

Cuts Full Size.

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CUT TACKS.

Ounces.....	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20
Inches.....	7/16	3/8	1/2	5/16	9/16	7/16	1/2	9/16	5/8	11/16	13/16	1 1/16	1 1/8	1 1/4
														

No. KA2—American Iron, Cut, Half Weight.

Ounces	1	1 1/2	2	2 1/2	3	4	6
Weight per dozen papers, ozs.....	6	7 1/2	12	15	18	24	36
Per dozen papers	\$1.40	1.45	1.50	1.55	1.60	1.85	2.35
Ounces	8	10	12	14	16	18	20
Weight per dozen papers, ozs.....	48	60	72	84	96	108	120
Per dozen papers	\$2.95	3.60	4.25	5.00	5.70	6.40	7.10

One Dozen Papers in a Package.

UPHOLSTERERS' TACKS.**No. U2—Half Weight, Swedes Soft Steel.**

Ounces	2	2 1/2	3	4	6	8	10	12	14	16
Weight per dozen papers, ozs.....	12	15	18	24	36	48	60	72	84	96
Per dozen papers	\$1.75	1.85	2.10	2.35	3.10	3.85	4.60	5.35	6.10	6.85

One Dozen Papers in a Package.

No. U1—Swedes Soft Steel, in 1 lb. Papers

Ounces	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
Per lb.	\$2.56	2.01	1.76	1.61	1.46	1.36	1.28	1.21	1.16	1.16	1.16

No. UB25—Swedes Soft Steel in 25 lb. Boxes.

Ounces	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16
Per lb.	\$2.48	1.93	1.66	1.53	1.38	1.28	1.18	1.13	1.08	1.08	1.08

BILL POSTERS' TACKS.

Ounces....	3	4	6	8
				

Railroad Card or Bill Posters'.**No. RR1—BLUED, IRON, CUT, Large Heads; in 1 lb. Papers.**

Ounces	3	4	6	8
Per lb.	\$1.53	1.38	1.28	1.18

No. RR5—BLUED, IRON CUT, Large Heads, in 5 lb. Papers.

Ounces	3	4	6	8
Per lb.	\$1.53	1.38	1.28	1.18

Ounces...	3	4	6	8
				

Railroad Card or Bill Posters'.**No. WRR1—BLUED, WIRE; Large Heads; in 1 lb. Papers.**

Ounces	3	4	6	8
Per lb.	\$1.61	1.46	1.36	1.26

No. WRR5—BLUED, WIRE; Large Heads; in 5 lb. Papers.

Ounces	3	4	6	8
Per lb.	\$1.61	1.46	1.36	1.26

100 lbs. in a Case.

Cuts Full Size.

CARPET TACKS.

Ounces....	4	6	8	10	12	14
Inches.....	7/16	9/16	1 1/16	1 1/8	1 1/4	1 1/2
						

Large Flat Head Carpet Tacks.**No. CB2—BLUED, HALF WEIGHT.**

Ounces	4	6	8	10	12	14
Weight doz. papers, ozs.	24	36	48	60	72	84
Per dozen papers.....	\$1.60	2.10	2.70	3.35	4.00	4.75

No. CFT4—TINNED, QUARTER WEIGHT.

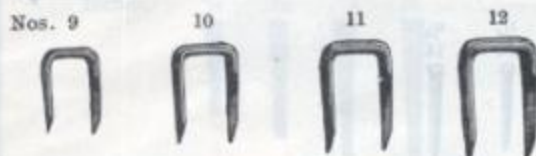
Ounces	4	6	8	10	12	14
Weight doz. papers, ozs.	12	18	24	30	36	42
Per dozen papers.....	\$1.35	1.60	2.00	2.35	2.70	3.26

No. CFT2—TINNED, HALF WEIGHT.

Ounces	6	8	10	12	14
Weight doz. papers, ozs.	36	48	60	72	84
Per dozen papers.....	\$3.00	3.70	4.50	5.35	6.15

One Dozen Papers in a Package.

-1598-

DOUBLE POINTED TACKS.

Blued, 100 in a Paper.

Nos.	9B	10B	11B	12B
Weight per doz. papers, ozs.	15	16	21	22
Per dozen papers.....	\$1.20	1.30	1.40	1.95

Tinned, 100 in a Paper.

Nos.	9T	10T	11T	12T
Weight per doz. papers, ozs.	15	16	21	22
Per dozen papers.....	\$1.55	1.65	1.80	2.50

One Dozen Papers in a Package.

Blued, in Bulk.

Nos.	B9/25	B10/25	B11/25	B12/25
Per lb.	\$0.46	.42	.41	.40

25 lbs. in a Wood Box.

GIMP TACKS.

Ounces...	2	2½	3	4	6	8	10
Inches...	2/16	3/16	3/16	3/16	3/16	3/16	3/16

No. GB2—BLUED; HALF WEIGHT.

Ounces	2	2½	3	4	6	8	10
Weight per dozen papers, ozs.	6	7½	9	12	18	24	30
Per dozen papers.....	\$2.35	2.50	2.85	3.25	3.85	4.75	5.60

One Dozen Papers in a Package.

LINING TACKS.

Ounces...	2½	4	6	8	10
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No. L0B—OVAL SOLID HEAD, BRIGHT.

Ounces	2½	4	6	8	10
Weight doz. papers, ozs.	8	11	14	16	17
Per dozen papers.....	\$0.60	.60	.60	.60	.60

Ounces...	2½	4	6	8	10
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No. L0J—OVAL SOLID HEAD, JAPANNED.

Ounces	2½	4	6	8	10
Weight doz. papers, ozs.	8	11	14	16	17
Per dozen papers.....	\$0.60	.60	.60	.60	.60

75 Tacks in a Paper; One Dozen Papers in a Package.

SHANK TACKS.

Inches.....	4/8	5/8	6/8
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No. 80B2—OVAL HEAD, BLUED; PUT UP IN ½ LB. PAPERS.

Inches	4/8	5/8	6/8
Per lb.	\$0.21 ⁵ / ₁₀	.21 ⁵ / ₁₀	.21 ⁵ / ₁₀

SHOE TACKS.

Ounces.....	1	1½	2	2½
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No. STS—FLAT HEAD, BRIGHT, TO CLINCH.

Ounces	1	1½	2	2½
Weight per doz. papers, ozs.	18	18	18	18
Per dozen papers.....	\$0.54	.50	.44	.42

Put up in 2 oz. Papers; One Dozen Papers in a Package.

Cuts Full Size.

-1599-

CORRUGATED SHOE NAILS.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
						

No. 5—BRASS SHOE NAILS, FLAT HEAD; Put up in 2 oz. TIN BOXES; Tack Points.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
Per dozen boxes	\$0.57	.57	.54 $\frac{1}{10}$	.54 $\frac{1}{10}$	.54 $\frac{1}{10}$	.54 $\frac{1}{10}$

One Dozen Boxes in a Package; 1 $\frac{1}{2}$ lbs. to the Dozen.

No. BPN2—"SURE GRIP"; COBBLER'S IRON SHOE NAILS, BRASS PLATED, FLAT HEAD; Put up in 2 OZ. PAPERS; Tack Points.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
Dozen papers \$.....						

No. BPN4—"SURE GRIP"; COBBLER'S IRON SHOE NAILS, BRASS PLATED, FLAT HEAD; Put up in $\frac{1}{4}$ LB. PAPERS; Tack Points.







Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
Dozen papers \$.....						

No. CBN4—"SURE GRIP"; COBBLER'S IRON SHOE NAILS, FLAT HEAD; Put up in $\frac{1}{4}$ LB. PAPERS; Tack Points.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
Per dozen papers	\$0.52 $\frac{8}{10}$	.52 $\frac{8}{10}$	.52 $\frac{8}{10}$	.52 $\frac{8}{10}$	.47 $\frac{7}{10}$	.47 $\frac{7}{10}$

One Dozen Papers in a Package; 3 lbs. to the Dozen.

HUNGARIAN NAILS.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
						

Round Head.

No. 20—American Iron; Put up in $\frac{1}{4}$ LB. PAPERS.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
Per dozen papers	\$1.26	1.14	1.14	1.14	1.14	1.14

3 lbs. to the Dozen.

One Dozen Papers in a Package.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
						

Cone Head.

No. 30—American Iron; Put up in $\frac{1}{4}$ LB. PAPERS.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10	14
Per dozen papers	\$1.26	1.14	1.14	1.14	1.14	1.14

3 lbs. to the Dozen.

HOB NAILS.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10
					

Hob Nails, Star Head, in $\frac{1}{2}$ LB PAPERS.

Inches	$\frac{3}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Ounces	3	4	6	8	10
Per lb.	\$0.12 $\frac{1}{2}$	.12 $\frac{1}{2}$	.12 $\frac{1}{2}$	.12 $\frac{1}{2}$	.12 $\frac{1}{2}$

Cuts Full Size.

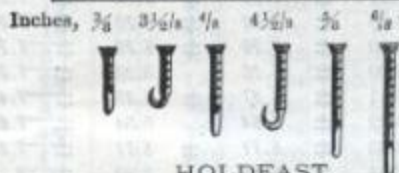
-1600-

SHOE NAILS.

Iron Shoe Nails.

No. 14—MEDIUM; IN 1 LB. PAPERS

Inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
Per lb.	\$0.09 $\frac{3}{10}$	.09 $\frac{3}{10}$	.09 $\frac{3}{10}$	.09 $\frac{3}{10}$

CLINCHING NAILS.

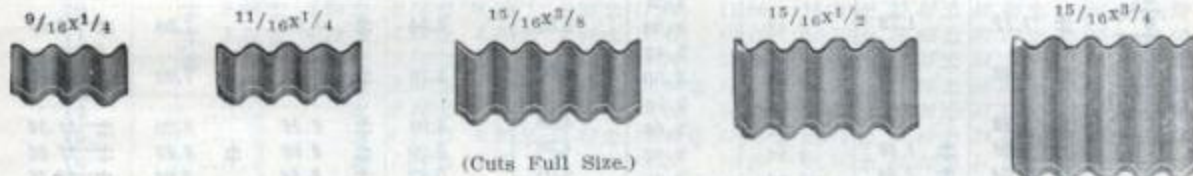
HOLDFAST.

No. HFN4—IRON WIRE; No. 16 WIRE, IN $\frac{1}{4}$ LB. PAPERS.

Inches	$\frac{3}{8}$	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	7	8	1
Dozen papers.	\$0.68	.68	.68	.68	.68	.68	.68	.68	.68

One Dozen Papers in a Package; 2 lbs to the Dozen.

(Cuts Full Size.)

CORRUGATED STEEL FASTENERS.

(Cuts Full Size.)

Are used in Making Boxes and Repairing Picture Frames or any Wood Article where a Joint Fastener is required. Have a Sharp Penetrating Lower Edge and can be Driven into Soft or Hard Wood.

No. 500.

Size, inches	$\frac{9}{16} \times \frac{1}{4}$	$\frac{9}{16} \times \frac{3}{8}$	$\frac{11}{16} \times \frac{1}{4}$	$\frac{11}{16} \times \frac{3}{8}$	$\frac{11}{16} \times \frac{1}{2}$	$\frac{11}{16} \times \frac{5}{8}$	$\frac{11}{16} \times \frac{3}{4}$
Number of corrugations	3	3	4	4	4	4	4
Weight per thousand about, lbs.	7 $\frac{1}{2}$	11 $\frac{1}{4}$	11 $\frac{1}{2}$	13 $\frac{1}{4}$	23 $\frac{1}{2}$	23 $\frac{1}{2}$	33 $\frac{1}{2}$
Per 1,000	\$0.60	.75	.75	.95	1.00	1.25	1.45
Size, inches	$\frac{15}{16} \times \frac{1}{4}$	$\frac{15}{16} \times \frac{3}{8}$	$\frac{15}{16} \times \frac{1}{2}$	$\frac{15}{16} \times \frac{5}{8}$	$\frac{15}{16} \times \frac{3}{4}$	$\frac{15}{16} \times \frac{5}{8}$	$\frac{15}{16} \times \frac{3}{4}$
Number of corrugations	5	5	5	5	5	6	6
Weight per thousand about, lbs.	13 $\frac{1}{2}$	23 $\frac{1}{2}$	3	33 $\frac{1}{2}$	43 $\frac{1}{2}$	5	33 $\frac{1}{2}$
Per 1,000	\$0.90	1.20	1.25	1.55	1.80	1.85	1.50

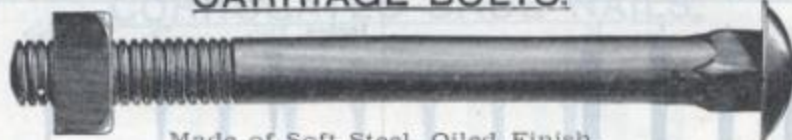
One-half Thousand in a Package.

No. 100.

Size, inches	$\frac{9}{16} \times \frac{1}{4}$	$\frac{9}{16} \times \frac{3}{8}$	$\frac{11}{16} \times \frac{1}{4}$	$\frac{11}{16} \times \frac{3}{8}$	$\frac{11}{16} \times \frac{1}{2}$	$\frac{11}{16} \times \frac{5}{8}$	$\frac{11}{16} \times \frac{3}{4}$
Number of corrugations	3	3	4	4	4	4	4
Weight per thousand about, lbs.	1	11 $\frac{1}{4}$	11 $\frac{1}{2}$	13 $\frac{1}{4}$	23 $\frac{1}{2}$	3	33 $\frac{1}{2}$
Per 1,000	\$0.60	.75	.75	.95	1.05	1.30	1.45
Size, inches	$\frac{15}{16} \times \frac{1}{4}$	$\frac{15}{16} \times \frac{3}{8}$	$\frac{15}{16} \times \frac{1}{2}$	$\frac{15}{16} \times \frac{5}{8}$	$\frac{15}{16} \times \frac{3}{4}$	$\frac{15}{16} \times \frac{5}{8}$	$\frac{15}{16} \times \frac{3}{4}$
Number of corrugations	5	5	5	5	5	6	6
Weight per thousand about, lbs.	13 $\frac{1}{2}$	23 $\frac{1}{2}$	33 $\frac{1}{2}$	43 $\frac{1}{2}$	5	5	33 $\frac{1}{2}$
Per 1,000	\$0.90	1.20	1.30	1.70	1.85	1.85	1.50

One Hundred in a Package.

CARRIAGE BOLTS.



Made of Soft Steel, Oiled Finish.

Standard List, Adopted and Effective June 1st, 1908.
Per 100.

Length, Inches	Diameter, Inches								
	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
1	\$1.00	\$1.00	\$1.40	\$1.90	‡ \$2.20	‡ \$3.00	‡ \$5.20	‡ \$5.20	‡ \$7.20
1 1/2	1.00	1.00	1.40	1.90	‡ 2.20	‡ 3.00	‡ 5.20	‡ 5.20	‡ 7.20
1 3/4	1.00	1.00	1.40	1.90	‡ 2.20	‡ 3.00	‡ 5.20	‡ 5.20	‡ 7.20
1 3/4	1.04	1.04	1.46	1.98	‡ 2.29	‡ 3.00	‡ 5.20	‡ 5.20	‡ 7.20
2	1.08	1.08	1.52	2.06	‡ 2.38	‡ 3.00	‡ 5.20	‡ 5.20	‡ 7.20
2 1/2	1.12	1.12	1.58	2.14	‡ 2.47	‡ 3.00	‡ 5.20	‡ 5.20	‡ 7.20
2 1/2	1.16	1.16	1.64	2.22	‡ 2.56	‡ 3.00	‡ 5.20	‡ 5.20	‡ 7.20
2 3/4	‡ 1.20	1.20	1.70	2.30	‡ 2.65	‡ 3.11	‡ 5.37	‡ 5.37	‡ 7.43
3	1.24	1.24	1.76	2.38	‡ 2.74	‡ 3.22	‡ 5.54	‡ 5.54	‡ 7.66
3 1/4	‡ 1.28	1.28	1.82	2.46	‡ 2.83	‡ 3.33	‡ 5.71	‡ 5.71	‡ 7.89
3 1/2	‡ 1.32	1.32	1.88	2.54	‡ 2.92	‡ 3.44	‡ 5.88	‡ 5.88	‡ 8.12
3 3/4	‡ 1.36	1.36	1.94	2.62	‡ 3.01	‡ 3.55	‡ 6.05	‡ 6.05	‡ 8.35
4	‡ 1.40	1.40	2.00	2.70	‡ 3.10	‡ 3.66	‡ 6.22	‡ 6.22	‡ 8.58
4 1/4	‡ 1.44	1.44	2.06	2.78	‡ 3.19	‡ 3.77	‡ 6.39	‡ 6.39	‡ 8.81
4 1/2	‡ 1.48	1.48	2.12	2.86	‡ 3.28	‡ 3.88	‡ 6.56	‡ 6.56	‡ 9.04
4 3/4	‡ 1.52	1.52	2.18	2.94	‡ 3.37	‡ 3.99	‡ 6.73	‡ 6.73	‡ 9.27
5	‡ 1.56	1.56	2.24	3.02	‡ 3.46	‡ 4.10	‡ 6.90	‡ 6.90	‡ 9.50
5 1/4				3.10					
5 1/2	‡ 1.64	1.64	2.36	3.18	‡ 3.64	‡ 4.32	‡ 7.24	‡ 7.24	‡ 9.96
5 3/4				3.26					
6	‡ 1.72	1.72	2.48	3.34	‡ 3.82	‡ 4.54	‡ 7.58	‡ 7.58	‡ 10.42
6 1/4				3.42					
6 1/2	‡ 1.80	1.80	2.60	3.50	‡ 4.00	‡ 4.76	‡ 7.92	‡ 7.92	‡ 10.88
6 3/4				3.58					
7	‡ 1.88	1.88	2.72	3.66	‡ 4.18	‡ 4.98	‡ 8.26	‡ 8.26	‡ 11.34
7 1/2	‡ 1.96	‡ 1.96	2.84	3.82	‡ 4.36	‡ 5.20	‡ 8.60	‡ 8.60	‡ 11.80
8	‡ 2.04	‡ 2.04	2.96	3.98	‡ 4.54	‡ 5.42	‡ 8.94	‡ 8.94	‡ 12.26
8 1/2	‡ 2.12	‡ 2.12	‡ 3.08	4.14	‡ 4.72	‡ 5.64	‡ 9.28	‡ 9.28	‡ 12.72
9	‡ 2.20	‡ 2.20	‡ 3.20	4.30	‡ 4.90	‡ 5.86	‡ 9.62	‡ 9.62	‡ 13.18
9 1/2	‡ 2.28	‡ 2.28	‡ 3.32	4.46	‡ 5.08	‡ 6.08	‡ 9.96	‡ 9.96	‡ 13.64
10	‡ 2.36	‡ 2.36	‡ 3.44	4.62	‡ 5.26	‡ 6.30	‡ 10.30	‡ 10.30	‡ 14.10
10 1/2				4.78		‡ 6.52			
11	‡ 2.52	‡ 2.52	‡ 3.68	4.94	‡ 5.62	‡ 6.74	‡ 10.98	‡ 10.98	‡ 15.02
12	‡ 2.68	‡ 2.68	‡ 3.92	5.26	‡ 5.98	‡ 7.18	‡ 11.66	‡ 11.66	‡ 15.94
13	‡ 2.84	‡ 2.84	‡ 4.16	5.58	‡ 6.34	‡ 7.62	‡ 12.34	‡ 12.34	‡ 16.86
14	‡ 3.00	‡ 3.00	‡ 4.40	5.90	‡ 6.70	‡ 8.06	‡ 13.02	‡ 13.02	‡ 17.78
15	‡ 3.16	‡ 3.16	‡ 4.64	‡ 6.22	‡ 7.06	‡ 8.50	‡ 13.70	‡ 13.70	‡ 18.70
16	‡ 3.32	‡ 3.32	‡ 4.88	‡ 6.54	‡ 7.42	‡ 8.94	‡ 14.38	‡ 14.38	‡ 19.62
17	‡ 3.48	‡ 3.48	‡ 5.12	‡ 6.86	‡ 7.78	‡ 9.38	‡ 15.06	‡ 15.06	‡ 20.54
18	‡ 3.64	‡ 3.64	‡ 5.36	‡ 7.18	‡ 8.14	‡ 9.82	‡ 15.74	‡ 15.74	‡ 21.46
19	‡ 3.80	‡ 3.80	‡ 5.60	‡ 7.50	‡ 8.50	‡ 10.26	‡ 16.42	‡ 16.42	‡ 22.38
20	‡ 3.96	‡ 3.96	‡ 5.84	‡ 7.82	‡ 8.86	‡ 10.70	‡ 17.10	‡ 17.10	‡ 23.30
22						11.58			
24						12.46			

3/16 and 1/4 inch, One Hundred in a Package.
 5/8 and 3/4 inch, One Hundred in a Package.
 7/16 and 1/2 inch, One Hundred in a Package.
 9/16 and 5/8 inch, One Hundred in a Package.

5/8 and 3/4 inch, One-half Hundred in a Package.
 7/16 and 1/2 inch, One-half Hundred in a Package.
 9/16 and 5/8 inch, One-half Hundred in a Package.
 3/4 inch, One-quarter Hundred in a Package.

Number of Carriage Bolts packed in case varies with size of Bolt. Bolts are packed 300 to 400 lbs. in a case.
 For Table of Weights see Page 2115.

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MACHINE BOLTS.



U. S. STANDARD THREAD.

Made of Soft Steel, Oiled Finish.

With Square Heads, Square Nuts and Finished Points.

Standard List, Adopted Sept. 20th, 1899, to take effect Oct. 1st, 1899.

Per 100.

Length, Inches.	Diameter, Inches.											
	1/4 in.	5/16 in.	3/8 in.	7/16 in.	1/2 in.	9/16 in.	5/8 in.	3/4 in.	7/8 in.	1 in.	1 1/8 in.	1 1/4 in.
1	\$ 1.70	\$ 2.00	\$ 2.40	\$ 2.80	\$ 3.00	\$....	\$....	\$....	\$....	\$....	\$....	\$....
1 1/4	1.70	2.00	2.40	2.80	3.00	5.20	5.20	7.20	10.50	15.10	22.50	30.00
1 1/2	1.70	2.00	2.40	2.80	3.00	5.20	5.58	7.70	11.20	16.00	23.70	31.50
2	1.78	2.12	2.50	3.00	3.86	5.58	5.96	8.20	11.90	16.90	24.90	33.00
2 1/4	1.86	2.24	2.72	3.20	4.12	5.96	6.34	8.70	12.60	17.80	26.10	34.50
2 1/2	1.94	2.36	2.88	3.40	4.38	6.34	6.72	9.20	13.30	18.70	27.30	36.00
3	2.02	2.48	3.04	3.60	4.64	6.72	7.10	9.70	14.00	19.60	28.50	37.50
3 1/4	2.10	2.60	3.20	3.80	4.90	7.10	7.48	10.20	14.70	20.50	29.70	39.00
3 1/2	2.18	2.72	3.36	4.00	5.16	7.48	7.86	10.70	15.40	21.40	30.90	40.50
4	2.26	2.84	3.52	4.20	5.42	7.86	8.24	11.20	16.10	22.30	32.10	42.00
4 1/4	2.34	2.96	3.68	4.40	5.68	8.24	8.62	11.70	16.80	23.20	33.30	43.50
4 1/2	2.42	3.08	3.84	4.60	5.94	8.62	9.00	12.20	17.50	24.10	34.50	45.00
5	2.50	3.20	4.00	4.80	6.20	9.00	9.38	12.70	18.20	25.00	35.70	46.50
5 1/4	2.58	3.32	4.16	5.00	6.46	9.38	9.76	13.20	18.90	25.90	36.90	48.00
5 1/2	2.66	3.44	4.32	5.20	6.72	9.76	10.14	13.70	19.60	26.80	38.10	49.50
6	2.74	3.56	4.48	5.40	6.98	10.14	10.52	14.20	20.30	27.70	39.30	51.00
6 1/4	2.82	3.68	4.64	5.60	7.24	10.52	10.90	14.70	21.00	28.60	40.50	52.50
6 1/2	2.90	3.80	4.80	5.80	7.50	10.90	11.28	15.20	21.70	29.50	41.70	54.00
7	3.06	4.04	5.12	6.20	8.02	11.28	11.66	15.70	22.40	30.40	42.90	55.50
7 1/4	3.22	4.28	5.44	6.60	8.54	12.42	13.18	16.70	23.80	32.20	45.30	58.50
7 1/2	3.38	4.52	5.76	7.00	9.06	13.18	13.94	17.70	25.20	34.00	47.70	61.50
8	3.54	4.76	6.08	7.40	9.58	13.94	14.70	18.70	26.60	35.80	50.10	64.50
8 1/4	3.70	5.00	6.40	7.80	10.10	14.70	15.46	19.70	28.00	37.60	52.50	67.50
8 1/2	3.86	5.24	6.72	8.20	10.62	15.46	16.22	20.70	29.40	39.40	54.90	70.50
9	4.02	5.48	7.04	8.60	11.14	16.22	16.98	21.70	30.80	41.20	57.30	73.50
9 1/4	4.18	5.72	7.36	9.00	11.66	16.98	17.74	22.70	32.20	43.00	59.70	76.50
9 1/2	4.34	5.96	7.68	9.40	12.18	17.74	18.50	23.70	33.60	44.80	62.10	79.50
10	4.50	6.20	8.00	9.80	12.70	18.50	19.26	24.70	35.00	46.60	64.50	82.50
10 1/4	4.66	6.44	8.32	10.20	13.22	19.26	19.98	25.70	36.40	48.40	66.90	85.50
10 1/2	4.82	6.68	8.64	10.60	13.74	19.98	20.74	26.70	37.80	50.20	69.30	88.50
11	4.98	6.92	8.96	11.00	14.26	20.74	21.50	27.70	39.20	52.00	71.70	91.50
11 1/4	5.14	7.16	9.28	11.40	14.78	21.50	22.26	28.70	40.60	53.80	74.10	94.50
11 1/2	5.30	7.40	9.60	11.80	15.30	22.26	23.02	29.70	42.00	55.60	76.50	97.50
12	5.46	7.64	9.92	12.20	15.82	23.02	23.78	30.70	43.40	57.40	78.90	100.50
12 1/4	5.62	7.88	10.24	12.60	16.34	23.78	24.54	31.70	44.80	59.20	81.30	103.50
12 1/2	5.78	8.12	10.56	13.00	16.86	24.54	25.30	32.70	46.20	61.00	83.70	106.50
13	5.94	8.36	10.88	13.40	17.38	25.30	26.06	33.70	47.60	62.80	86.10	109.50
13 1/4	6.10	8.60	11.20	13.80	17.90	26.06	26.82	34.70	49.00	64.60	88.50	112.50
13 1/2	6.26	8.84	11.52	14.20	18.42	26.82	27.58	35.70	50.40	66.40	90.90	115.50

† Extras.

† Bolts with Hexagon Heads or Hexagon Nuts, 10% extra.

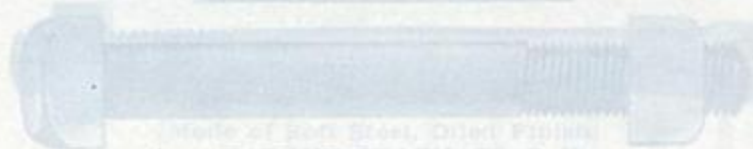
† If both Hexagon Heads and Hexagon Nuts, 20% extra.

† Joint Bolts with Oblong Nuts, Bolts with Tee Heads, Askew Heads and Eccentric Heads, 20% extra.

1/4 inch, One Hundred in a Package; 5/16, 3/8, 7/16 and 1/2 inch up to 7 inches, One-half Hundred in a Package; 1/2 inch and above 8 inches, One-quarter Hundred in a Package; 3/4 and 1 inch, One-quarter Hundred in a Package.

Number of Machine Bolts Packed in a Case varied with Size of Bolt. Machine Bolts are Packed 300 to 400 lbs. in a Case.

For Table of Weights see Page 2119.



COACH OR LAG SCREWS.



GIMLET POINTED.

Made of Soft Steel, Oiled Finish.

Manufacturers' List, Adopted and Effective Nov. 12th, 1908.

Square Heads.

Per 100.

Length, Inches	Diameter, Inches.							
	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
$1\frac{1}{2}$	\$2.25	\$2.70	‡ 3.15	‡ 3.75	\$	\$	\$	\$
2	2.45	2.95	‡ 3.47	4.11	‡ 6.00	....	....	....
$2\frac{1}{2}$	2.65	3.22	‡ 3.79	4.47	‡ 6.50	‡ 9.20	....	....
3	2.85	3.48	‡ 4.11	4.83	7.00	‡ 9.80	‡ 15.00	....
$3\frac{1}{2}$	3.05	3.74	‡ 4.43	5.19	7.50	‡ 10.60	‡ 16.00	‡ 22.00
4	3.25	4.00	‡ 4.75	5.55	8.00	‡ 11.30	‡ 17.00	‡ 23.30
$4\frac{1}{2}$	3.45	4.26	‡ 5.07	5.91	‡ 8.50	‡ 12.00	‡ 18.00	‡ 24.60
5	3.65	4.52	‡ 5.39	6.27	9.00	12.70	‡ 19.00	‡ 25.90
$5\frac{1}{2}$	3.85	4.78	‡ 5.71	6.63	‡ 9.50	‡ 13.40	‡ 20.00	‡ 27.20
6	4.05	5.04	‡ 6.03	6.99	10.00	14.10	‡ 21.00	‡ 28.50
$6\frac{1}{2}$	....	....	‡ 6.35	7.35	‡ 10.50	‡ 14.80	‡ 22.00	‡ 29.80
7	....	....	‡ 6.67	7.71	11.00	15.50	‡ 23.00	‡ 31.10
$7\frac{1}{2}$	....	....	‡ 6.99	‡ 8.07	‡ 11.50	‡ 16.20	‡ 24.00	‡ 32.40
8	....	....	‡ 7.31	8.43	12.00	16.90	‡ 25.00	‡ 33.70
9	....	....	‡ 7.95	9.15	13.00	18.30	‡ 27.00	‡ 36.30
10	....	....	....	‡ 9.87	14.00	19.70	‡ 29.00	‡ 38.90
11	....	....	....	‡ 10.59	‡ 15.00	‡ 21.10	‡ 31.00	‡ 41.50
12	....	....	....	‡ 11.31	‡ 16.00	22.50	‡ 33.00	‡ 44.10

‡ Extras.

‡ Hexagon Heads, 10% Extra.

‡ Ore-Washery Screws, 20% Extra.

$\frac{5}{16}$, $\frac{3}{8}$ and $\frac{1}{2}$ inch, One-half Hundred in a Package; $\frac{7}{16}$ and $\frac{3}{4}$ inch, One-quarter Hundred in a Package.

Number of Coach Screws Packed in a Case varies with Size of Screw; Coach Screws are Packed 300 to 400 lbs. in a Case.

For Weights on Lag Screws see Page 2119.

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STOVE BOLTS.

BESSEMER STEEL.

Standard List, Adopted March 1, 1907.



3/16 in.



1/4 in.



5/16 in.

Flat Head.

3/16 inch Diameter.

Length, inches	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/2
Weight per 100 about, lbs.....	3/4	1	1 1/4	1 3/4	1 5/8	1 3/4	1 3/4	2	2 1/4	2 3/4
Per 100	\$0.85	.85	.85	.90	.90	1.00	1.10	1.15	1.20	1.30

1/4 inch Diameter.

Length, inches	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3
Weight per 100 about, lbs.....	2	2 1/4	2 1/2	2 3/4	2 3/4	3 1/4	3 1/2	3 3/4	4 1/4	4 1/4	4 1/2	5 1/2
Per 100	\$1.20	1.20	1.20	1.25	1.30	1.40	1.50	1.55	1.60	1.70	1.80	2.00

5/16 inch Diameter.

Length, inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Weight per 100 about, lbs.....	3	4	4 1/4	5	6	7 1/2	8 1/4
Per 100	\$1.75	1.85	1.95	2.05	2.30	2.50	2.70

100 in a Package.



3/16 in.



1/4 in.

Round Head.

5/32 inch Diameter.

Length, inches	1/2	5/8	3/4	1	1 1/4
Weight per 100 about, lbs.....	1/2	3/4	1	1 1/4	1 1/4
Per 100	\$0.85	.85	.85	.90	1.00

3/16 inch Diameter.

Length, inches	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/2
Weight per 100 about, lbs.....	1	1 1/4	1 1/4	1 1/2	1 1/2	2	2 1/4	2 1/4	2 1/2	2 3/4
Per 100	\$0.85	.85	.85	.90	.90	1.00	1.10	1.15	1.20	1.30

1/4 inch Diameter.

Length, inches	1/2	5/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3
Weight per 100 about, lbs.....	2 1/2	2 1/4	2 1/2	2 3/4	2 3/4	3 1/4	3 1/2	3 3/4	4 1/4	4 1/4	5 1/4	6 1/4
Per 100	\$1.20	1.20	1.20	1.25	1.30	1.40	1.50	1.55	1.60	1.70	1.80	2.00

100 in a Package.

Per Assortment

S. H. CO.* Assortment Contains 10 each of the following Stove Bolts: Flat Head 3/16x3/4, 3/16x1, 1/4x3/4, 1/4x1, 1/4x1 1/4, 1/4x1 1/2; Round Head, 3/16x3/4, 3/16x1, 1/4x3/4, 1/4x1 inch; Weight per Assortment 1 1/2 lbs..... \$0.92
One Hundred (One Assortment) in a Cardboard Box.

-2122-

BOLTS.

For Repairing Baby Carriages, with Square Nuts.

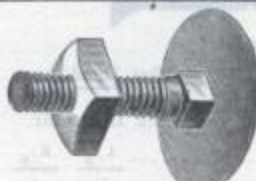
Handy Assortment—Consisting of Special Oval Head, Tinned; 64 $\frac{3}{16}$ x $1\frac{1}{2}$ inch; 12 $1\frac{1}{2}$ inch; 12 $2\frac{1}{4}$ inch; Round Head, Slotted Stove, Tinned; 12 $\frac{3}{16}$ x 1 inch..... \$2.00

One Hundred in a Paper; Weight per 100 about 2 lbs.

ELEVATOR BOLTS.**Eclipse.**

Wrought Iron, Slotted Head.

$\frac{3}{4}$ x $\frac{3}{4}$ inch Per 100 \$2.20
Weight per 100 about 3 lbs.

**Excelsior.**

Wrought Iron.

Inches $\frac{3}{4}$ x $\frac{3}{4}$ $\frac{3}{4}$ x 1 $\frac{3}{4}$ x $1\frac{1}{4}$
Weight per 100 about, lbs. 3 $\frac{1}{2}$ 3 $\frac{1}{2}$ 3 $\frac{1}{2}$
Per 100 \$2.20 2.30 2.40

One Hundred in a Package; Packed Loose.

**Samson.**

Wrought Iron.

$\frac{3}{4}$ x $\frac{7}{8}$ inch Wide, $1\frac{1}{16}$ inch Per 100
Head \$2.20
Weight per 100 about 3 $\frac{1}{4}$ lbs.

IRON SET SCREWS.

V Thread, Cup Point, Case Hardened. Per 100.
Diameter and Length of Head, same as Diameter of Screw.

Diameter of Screw, Inches.	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{4}$
$\frac{1}{8}$ in.	\$ 1.80	\$ 2.00	\$ 2.35	\$...	\$...	\$...	\$...	\$...	\$...	\$...	\$...	\$...
$\frac{3}{16}$ in.	2.00	2.20	2.50	2.90	3.40	5.00	5.00	5.00	5.00	5.00	5.00	5.00
$\frac{1}{4}$ in.	2.15	2.35	2.65	3.10	3.80	5.75	5.75	10.00	10.00	10.00	10.00	10.00
$\frac{5}{16}$ in.	2.30	2.50	2.85	3.50	4.30	6.50	6.50	11.00	15.50	15.50	15.50	15.50
$\frac{3}{8}$ in.	2.50	2.70	3.10	4.00	4.80	7.25	7.25	12.00	18.20	22.00	22.00	22.00
$\frac{7}{16}$ in.	2.75	3.00	3.50	4.50	5.40	8.00	8.00	12.80	17.70	24.00	24.00	41.70
$\frac{1}{2}$ in.	3.25	3.50	4.00	5.15	6.00	8.80	8.80	13.60	19.20	26.00	45.00	54.00
$\frac{5}{8}$ in.	3.75	4.00	4.50	5.75	6.75	9.60	9.60	14.50	20.70	28.00	48.30	58.30
$\frac{3}{4}$ in.	4.25	4.50	5.00	6.35	7.50	10.40	10.40	15.40	22.20	30.00	51.60	62.60
$\frac{7}{8}$ in.	4.75	5.00	5.50	6.75	8.25	11.20	11.20	16.30	23.70	32.00	54.90	66.90
1 in.	5.25	5.50	6.00	7.20	9.00	12.00	12.00	17.30	25.20	34.00	58.20	71.20
$1\frac{1}{8}$ in.	5.75	6.10	6.70	7.80	9.75	12.75	12.75	18.40	26.70	36.00	61.50	75.50
$1\frac{1}{4}$ in.	6.25	6.70	7.40	8.80	10.50	13.50	13.50	19.50	28.20	38.00	64.80	79.80
$1\frac{3}{8}$ in.	6.75	7.30	8.10	9.50	11.25	14.30	14.30	20.75	29.70	40.00	68.10	84.10
$1\frac{1}{2}$ in.	7.25	7.90	8.80	10.30	12.00	15.10	15.10	22.00	31.20	42.00	71.40	88.40
$1\frac{3}{4}$ in.	7.75	8.50	9.50	11.00	12.75	15.90	15.90	23.50	32.70	44.00	74.70	92.70
$1\frac{7}{8}$ in.	8.25	9.10	10.20	11.75	13.50	16.70	16.70	25.00	34.20	46.00	78.00	97.00
2 in.	8.75	9.70	10.90	12.50	14.30	17.50	17.50	26.50	35.70	48.00	81.30	101.30
$2\frac{1}{8}$ in.	9.25	10.30	11.60	13.25	15.10	18.30	18.30	28.00	37.20	50.00	84.60	105.60
No. of Threads	20	18	16	14	12	12	11	10	9	8	7	7
Add for each $\frac{1}{4}$ in.	\$0.50	.60	.70	.80	.90	1.10	1.10	1.50	1.70	2.25	3.30	4.90

Approximate Weights, per Hundred, of Iron Set Screws; $\frac{3}{8}$ x $\frac{3}{4}$, 3 lbs.; $\frac{1}{2}$ x 1, 5 lbs.; $\frac{5}{8}$ x $1\frac{1}{4}$, 13 $\frac{1}{2}$ lbs.; $\frac{3}{4}$ x $1\frac{1}{2}$, 15 $\frac{1}{4}$ lbs.; $\frac{7}{8}$ x $1\frac{3}{4}$, 28 lbs.; 1 x 2, 30 lbs.; $1\frac{1}{8}$ x $2\frac{1}{2}$, 35 lbs.; $1\frac{1}{4}$ x 3, 40 lbs.

Packed Loose.

Smaller sizes same price as $\frac{1}{2}$ inch. None longer than 3 inch carried in stock.
Case Hardened Iron Set Screws are for many purposes, as good as Steel.

-2123-



Hexagon Head.

CAP SCREWS.

BESSEMER STEEL.



Square Head.

Square Finished Heads, V Thread, per 100.

Diam. of Screw, in.	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4
Diam. of Head, in.	7/16	1/2	9/16	5/8	3/4	13/16	7/8	1	1 1/8	1 1/4	1 5/8	1 3/4
Length of Head, in.	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4
1/2 in.	\$ 3.00	\$ 3.25	\$ 3.75	\$ 4.50	\$ 5.70	\$ 7.25	\$ 9.25	\$ 12.50	\$ 18.40	\$ 22.75	\$ 34.00	\$ 38.50
5/8 in.	3.00	3.25	3.75	4.50	5.70	7.25	9.25	12.50	18.40	22.75	34.00	38.50
1 in.	3.25	3.50	4.00	4.90	5.90	7.50	9.50	12.50	18.40	22.75	34.00	38.50
1 1/8 in.	3.50	3.75	4.25	5.30	6.50	8.25	10.50	13.50	18.40	22.75	34.00	38.50
1 1/2 in.	3.75	4.00	4.50	5.70	7.10	9.00	11.50	15.00	19.70	24.75	38.50	45.50
1 3/4 in.	4.00	4.25	4.85	6.10	7.70	10.00	13.00	17.00	22.00	27.50	42.25	49.00
2 in.	4.25	4.50	5.20	6.50	8.30	11.00	14.50	19.00	24.50	30.00	45.00	52.50
2 1/4 in.	4.70	5.35	6.55	7.75	9.90	13.00	17.50	23.00	29.00	35.00	50.00	58.00
2 1/2 in.	5.25	5.80	7.00	8.50	10.50	14.00	19.00	25.00	31.00	38.00	53.25	63.00
2 3/4 in.	5.75	6.30	7.60	9.15	11.50	15.50	21.00	27.00	34.00	42.00	58.00	68.50
3 in.	6.25	6.80	8.20	9.75	12.30	17.00	23.00	30.00	38.00	47.00	64.25	77.00
3 1/2 in.	7.30	7.80	9.15	11.50	14.00	19.00	26.00	34.00	43.00	53.00	72.00	85.00
3 3/4 in.	8.40	8.90	10.50	13.10	16.00	21.00	29.00	38.00	48.00	59.00	80.00	95.00
4 in.	9.50	10.00	11.50	14.00	17.00	22.00	31.00	41.00	52.00	64.00	86.00	102.00
4 1/2 in.	10.50	11.00	12.50	15.00	18.00	24.00	34.00	45.00	57.00	70.00	94.00	112.00
4 3/4 in.	11.50	12.00	13.50	16.00	19.00	26.00	37.00	49.00	62.00	77.00	103.00	123.00
5 in.	12.50	13.00	14.50	17.00	20.00	28.00	40.00	53.00	67.00	83.00	111.00	133.00
No. of Threads to in.	20	18	16	14	12	12	11	10	9	8	7	7
Add for each 1/4 in.	\$0.40	.50	.60	.70	.80	1.30	1.30	1.60	1.80	2.25	2.75	3.50

Hexagon Finished Heads, V Thread, per 100.

Diam. of Screw, in.	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4
Diam. of Head, in.	7/16	1/2	9/16	5/8	3/4	13/16	7/8	1	1 1/8	1 1/4	1 5/8	1 3/4
Length of Head, in.	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4
1/2 in.	\$ 3.00	\$ 3.25	\$ 3.75	\$ 4.50	\$ 5.70	\$ 7.25	\$ 9.25	\$ 12.50	\$ 18.40	\$ 22.75	\$ 34.00	\$ 38.50
5/8 in.	3.00	3.25	3.75	4.50	5.70	7.25	9.25	12.50	18.40	22.75	34.00	38.50
1 in.	3.25	3.50	4.00	4.90	5.90	7.50	9.50	12.50	18.40	22.75	34.00	38.50
1 1/8 in.	3.50	3.75	4.25	5.30	6.50	8.25	10.50	13.50	18.40	22.75	34.00	38.50
1 1/2 in.	3.75	4.00	4.50	5.70	7.10	9.00	11.50	15.00	19.70	24.75	38.50	45.50
1 3/4 in.	4.00	4.25	4.85	6.10	7.70	10.00	13.00	17.00	22.00	27.50	42.25	49.00
2 in.	4.25	4.50	5.20	6.50	8.30	11.00	14.50	19.00	24.50	30.00	45.00	52.50
2 1/4 in.	4.70	5.35	6.55	7.75	9.90	13.00	17.50	23.00	29.00	35.00	50.00	58.00
2 1/2 in.	5.25	5.80	7.00	8.50	10.50	14.00	19.00	25.00	31.00	38.00	53.25	63.00
2 3/4 in.	5.75	6.30	7.60	9.15	11.50	15.50	21.00	27.00	34.00	42.00	58.00	68.50
3 in.	6.25	6.80	8.20	9.75	12.30	17.00	23.00	30.00	38.00	47.00	64.25	77.00
3 1/2 in.	7.30	7.80	9.15	11.50	14.00	19.00	26.00	34.00	43.00	53.00	72.00	85.00
3 3/4 in.	8.40	8.90	10.50	13.10	16.00	21.00	29.00	38.00	48.00	59.00	80.00	95.00
4 in.	9.50	10.00	11.50	14.00	17.00	22.00	31.00	41.00	52.00	64.00	86.00	102.00
4 1/2 in.	10.50	11.00	12.50	15.00	18.00	24.00	34.00	45.00	57.00	70.00	94.00	112.00
4 3/4 in.	11.50	12.00	13.50	16.00	19.00	26.00	37.00	49.00	62.00	77.00	103.00	123.00
5 in.	12.50	13.00	14.50	17.00	20.00	28.00	40.00	53.00	67.00	83.00	111.00	133.00
No. of Threads to in.	20	18	16	14	12	12	11	10	9	8	7	7
Add for each 1/4 in.	\$0.40	.50	.60	.70	.80	1.30	1.30	1.60	1.80	2.25	2.75	3.50

Approximate Weights, per Hundred, of Cap Screws: 1/4x1/2, 2 lbs.; 5/8x3/4, 3 1/2 lbs.; 1/2x1, 5 1/2 lbs.; 3/4x1 1/4, 16 lbs.; 1/2x1 1/2, 31 lbs.; 3/4x3, 46 lbs.; 1x3, 50 lbs.

Smaller Sizes same price as 1/2 inch; none longer than 3 inch carried in stock.

FLAT HEAD IRON MACHINE SCREWS.

Rolls Thread.

Threads to Inch	48 56 64	48 56	32	36	40	32 36 40	30	32	36	30 32	32	36	24 30 32	20 24 30	16
Number	2	3	4	4	4	5	6	6	6	7	8	8	8	9	10
Inches	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
3/16	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
5/16	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
3/8	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
7/16	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1/2	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
9/16	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
5/8	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
3/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
7/8	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1 1/8	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1 1/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1 3/8	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1 1/2	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
1 3/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
2	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
2 1/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
2 1/2	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
2 3/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
3	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
3 1/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
3 1/2	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
3 3/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross
4 1/4	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross	Per Gross

-2125-

One Gross in a Package.

Weights per Gross of Some of the Principal Sellers.

1/4 inch, No. 6, 32 Thread.....	1/4 lb.	1 inch, No. 24, 16 Thread.....	5 lbs.
3/8 inch, No. 10, 24 Thread.....	1/2 lb.	1 1/4 inch, No. 14, 20 Thread.....	2 1/2 lbs.
1/2 inch, No. 12, 20 Thread.....	1 lb.	1 1/2 inch, No. 16, 18 Thread.....	3 1/2 lbs.
3/4 inch, No. 14, 20 Thread.....	1 1/2 lb.		
1 inch, No. 16, 18 Thread.....	2 lbs.		
1 1/4 inch, No. 18, 16 Thread.....	2 1/2 lbs.		
1 1/2 inch, No. 20, 14 Thread.....	3 lbs.		
1 3/4 inch, No. 22, 12 Thread.....	3 1/2 lbs.		
2 inch, No. 24, 10 Thread.....	4 lbs.		
2 1/4 inch, No. 26, 8 Thread.....	4 1/2 lbs.		
2 1/2 inch, No. 28, 7 Thread.....	5 lbs.		
2 3/4 inch, No. 30, 6 Thread.....	5 1/2 lbs.		
3 inch, No. 32, 5 Thread.....	6 lbs.		
3 1/4 inch, No. 34, 4 Thread.....	6 1/2 lbs.		
3 1/2 inch, No. 36, 3 Thread.....	7 lbs.		
3 3/4 inch, No. 38, 2 Thread.....	7 1/2 lbs.		
4 inch, No. 40, 1 Thread.....	8 lbs.		

ROUND HEAD IRON MACHINE SCREWS.

Rolled Thread.

[illegible]

One Gross in a Package.

Weights per Gross of Some of the Principal Sellers.

1	inch, No. 24, 16 Thread.....	6 ⁵ / ₈ lbs.
1	inch, No. 24, 16 Thread.....	6 ⁵ / ₈ lbs.
1	inch, No. 14, 20 Thread.....	3 lbs.
1	inch, No. 14, 20 Thread.....	3 lbs.
1	inch, No. 20, 18 Thread.....	5 ³ / ₄ lbs.



NUTS.

BESSEMER STEEL.



Plain Square: Hot Punched.

United States Standard List, Adopted February 17th, 1899.

Size of Bolt, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
Width, inches	$\frac{1}{2}$	$\frac{10}{32}$	$\frac{11}{16}$	$\frac{25}{32}$	$\frac{3}{4}$	$\frac{31}{32}$	$1\frac{1}{16}$	$1\frac{3}{4}$	$1\frac{7}{16}$
Thickness, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
Hole, inches	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{10}{64}$	$\frac{11}{32}$	$\frac{13}{32}$	$\frac{29}{64}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{47}{64}$
Number in 100 lbs.	6680	3540	2735	1694	1265	917	684	408	276
Per lb.	\$0.13	.12	.10 $\frac{1}{2}$	.10	.09	.09	.08 $\frac{7}{16}$	.08 $\frac{1}{2}$	.08 $\frac{4}{10}$

Size of Bolt, inches	1	$\pm\frac{1\frac{1}{8}}$	$\pm\frac{1\frac{1}{4}}$	$\pm\frac{1\frac{3}{8}}$	$\pm\frac{1\frac{1}{2}}$	$\pm\frac{1\frac{5}{8}}$	$\pm\frac{1\frac{3}{4}}$	$\pm\frac{1\frac{7}{8}}$	± 2
Width, inches	$1\frac{1}{8}$	$1\frac{13}{16}$	2	$2\frac{1}{16}$	$2\frac{3}{8}$	$2\frac{1}{8}$	$2\frac{3}{4}$	$2\frac{13}{16}$	$3\frac{1}{8}$
Thickness, inches	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{5}{8}$	$1\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{3}{4}$	$1\frac{7}{8}$	2
Hole, inches	$\frac{21}{32}$	$1\frac{5}{16}$	$1\frac{1}{16}$	$1\frac{5}{32}$	$1\frac{9}{32}$	$1\frac{29}{64}$	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{29}{32}$
Number in 100 lbs.	188	234	103	73	60	48	37	32	27
Per lb.	\$0.08 $\frac{5}{10}$	.08 $\frac{4}{10}$	.08 $\frac{4}{10}$	.08 $\frac{1}{2}$	.08 $\frac{6}{10}$	.09	.09 $\frac{3}{10}$	.09 $\frac{1}{2}$	.09 $\frac{7}{10}$



Plain Hexagon: Hot Punched.

Size of Bolt, inches	$\pm\frac{1}{4}$	$\pm\frac{5}{16}$	$\pm\frac{3}{8}$	$\pm\frac{7}{16}$	$\pm\frac{1}{2}$	$\pm\frac{9}{16}$	$\pm\frac{5}{8}$	$\pm\frac{3}{4}$	$\pm\frac{7}{8}$
Width, inches	$\frac{1}{2}$	$\frac{10}{32}$	$\frac{11}{16}$	$\frac{25}{32}$	$\frac{3}{4}$	$\frac{31}{32}$	$1\frac{1}{16}$	$1\frac{3}{4}$	$1\frac{7}{16}$
Thickness, inches	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
Hole, inches	$\frac{9}{16}$	$\frac{1}{4}$	$\frac{10}{64}$	$\frac{11}{32}$	$\frac{13}{32}$	$\frac{29}{64}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{47}{64}$
Number in 100 lbs.	8700	4800	3000	2000	1500	1084	770	499	314
Per lb.	\$0.20	.18	.14	.13	.11 $\frac{1}{10}$	.11 $\frac{2}{10}$	.10 $\frac{1}{2}$	10	.09 $\frac{6}{10}$

Size of Bolt, inches	1	$\pm\frac{1\frac{1}{8}}$	$\pm\frac{1\frac{1}{4}}$	$\pm\frac{1\frac{3}{8}}$	$\pm\frac{1\frac{1}{2}}$	$\pm\frac{1\frac{5}{8}}$	$\pm\frac{1\frac{3}{4}}$	$\pm\frac{1\frac{7}{8}}$	± 2
Width, inches	$1\frac{1}{8}$	$1\frac{13}{16}$	2	$2\frac{1}{16}$	$2\frac{3}{8}$	$2\frac{1}{8}$	$2\frac{3}{4}$	$2\frac{13}{16}$	$3\frac{1}{8}$
Thickness, inches	1	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{5}{8}$	$1\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{3}{4}$	$1\frac{7}{8}$	2
Hole, inches	$\frac{21}{32}$	$1\frac{5}{16}$	$1\frac{1}{16}$	$1\frac{5}{32}$	$1\frac{9}{32}$	$1\frac{29}{64}$	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{29}{32}$
Number in 100 lbs.	218	144	125	91	72	58	48	40	31
Per lb.	\$0.00 $\frac{8}{10}$	.09 $\frac{1}{10}$	.09 $\frac{1}{10}$	.10	.10 $\frac{1}{10}$	.10 $\frac{1}{2}$	.10 $\frac{1}{10}$	.11	.11 $\frac{2}{10}$

In 5 and 25 lb. Boxes; In 200 lb. Kegs.

2132

IRON NUTS.



Threaded Square.

Hot Punched; Chamfered and Trimmed; United States Standard.

For Bolt, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Width, inches	1/2	19/32	11/16	25/32	3/4	11/16	1 1/4	1 7/16	1 5/8
Thickness, inches	3/8	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Hole, inches	3/16	1/4	19/64	11/32	15/32	3/4	5/8	47/64	27/32
Threads to the inch	20	18	16	14	13	11	10	9	9
Number in 100 lbs.	6680	3540	2739	1604	1265	684	408	276	199
Per 100 lbs.	\$15.00	13.50	11.60	10.90	9.70	9.20	8.90	8.80	8.80

In 5 and 25 lb. Boxes; In 200 lb. Kegs.



Threaded Hexagon.

Hot Punched; United States Standard.

For Bolt, inches	3/8	1/2	5/8	3/4	7/8	1
Width, inches	11/16	3/4	11/16	1 1/4	1 7/16	1 5/8
Thickness, inches	3/8	1/2	5/8	3/4	7/8	1
Hole, inches	19/64	13/32	3/4	5/8	47/64	27/32
Threads to the inch	18	13	11	10	9	8
Number in 100 lbs.	3200	1500	850	520	340	230
Per 100 lbs.	\$15.60	12.20	11.20	10.60	10.50	10.50

In 5 and 25 lb. Boxes; In 200 lb. Kegs.



Semi-Finished Hexagon.

Showing Finish of Bottom.

Chamfered, Trimmed and Reamed; Tapped and Bottom Faced True with V Thread.

For Bolt, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1 1/8
Thickness, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1	1 1/8
Diameter, inches	1/2	19/32	11/16	25/32	3/4	11/16	1 1/4	1 7/16	1 5/8	1 13/16
Threads to the inch	20	18	16	14	12	11	10	9	8	7
Number in package	100	100	100	100	100	100	50	50	50	25
Per 100	\$2.00	2.50	3.25	3.75	4.50	6.50	8.50	12.00	16.50	22.00

Semi-Finished Hexagon Nuts are finished on the under side only, and not case hardened.
For Use on Cap and Set Screws.

— 2133 —

MALLEABLE IRON THUMB NUTS.

Drilled and Tapped, with V Thread.

Threaded to Fit Cap and Set Screws.

100 in a Package.



Per 100

No. T6—Tapped Thumb Nuts,	
Malleable Iron, $\frac{1}{4}$	
inch Diameter, 36 Threads	
to inch	\$1.50
Weight per 100 about $\frac{3}{4}$ lb.	



Per 100

No. TS—Tapped Thumb Nuts,	
Malleable Iron, $\frac{3}{16}$ inch	
Diameter, 24 Threads to	
inch	\$1.50
Weight per 100 about $1\frac{1}{4}$ lbs.	



Per 100

No. T10—Tapped Thumb
Nuts, Malleable Iron,
 $\frac{1}{4}$ inch in Diameter, 20
Threads to inch..... \$1.50
Weight per 100 about $1\frac{3}{4}$ lbs.



Per 100

No. T12—Tapped Thumb
Nuts, Malleable Iron.
 $\frac{5}{16}$ inch Diameter, 18
Threads to inch \$2.00
Weight per 100 about $2\frac{1}{2}$ lbs.



Per 100

No. T14—Tapped Thumb
Nuts, Malleable Iron,
¾ inch Diameter, 16
Threads to inch..... \$2.50
Weight per 100 about 4¾ lbs.



Per 100

No. T16—Tapped Thumb
Nuts, Malleable Iron,
 $\frac{1}{2}$ inch Diameter, 12
Threads to inch..... \$4.00
Weight per 100 about $5\frac{1}{2}$ lbs.

FORGED STEEL THUMB NUT BLANKS.



Per 100

No. 1TN—Thumb
Nut Blanks, \$2.60
Will Tap for $\frac{5}{16}$ in. Bolt.
Wgt. per 100 about 5 lbs.



Per 100

No. 2TN—Thumb
Nut Blanks, \$3.25
Will Tap for $\frac{3}{4}$ in. Bolt,
Wgt. per 100 about 10 lbs.



Per 100

No. 3TN—Thumb
Nut Blanks, \$4.00
Will Tap for $\frac{7}{16}$ in. Bolt.
Wgt. per 100 about 12 lbs.



Per 100

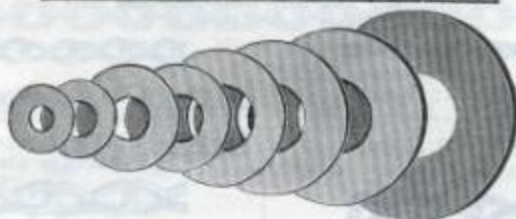
No. 4TN—Thumb
Nut Blanks, \$5.00
Will Tap for $\frac{1}{2}$ in. Bolt.
Wgt. per 100 about 18 lbs.

FORGED STEEL THUMB-SCREW BLANKS.

Plain Finish.

[illegible]

-2134-

WROUGHT WASHERS.

Manufacturers' List, Adopted October 9th, 1895.

Wrought.

Size of Bolt, inches	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$
Diameter, inches	$\frac{9}{16}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{7}{8}$
Size of Hole, inches	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{2}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{4}$
Thickness, Wire Gauge, Numbers	18	16	16	14	14	12	12	10
Number in 100 lbs.	39400	13900	11250	6800	4300	3600	2255	1300
Per pound	\$0.14	$.12\frac{1}{2}$	$.11\frac{1}{2}$	$.10\frac{1}{2}$	$.09\frac{7}{10}$	$.09\frac{1}{5}$	$.09\frac{1}{10}$	.09

Size of Bolt, inches	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Diameter, inches	2	$2\frac{1}{4}$	$2\frac{1}{2}$	3	$3\frac{1}{2}$
Size of Hole, inches	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$	$1\frac{1}{2}$
Thickness, Wire Gauge, Numbers	10	9	9	9	8
Number in 100 lbs.	1000	867	634	400	260
Per pound	$\$0.08\frac{1}{5}$	$.08\frac{1}{5}$	$.08\frac{1}{5}$	.09	$.09\frac{1}{5}$

In 5 and 25 lb. Boxes; In 200 lb. Kegs.

**MALLEABLE WASHERS.**Weight One-third of Cast
Iron Washers.

Malleable.

Size of Bolt, inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Diameter, inches	$2\frac{1}{2}$	3	3	$3\frac{1}{2}$	4	5	6
Thickness, inches	$\frac{3}{16}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{9}{16}$	$\frac{3}{4}$	$\frac{3}{4}$
Per pound	.....	.....	.....	.....	.....	.....	.....

Comparative Weight of Malleable Iron Washers, Against the Old Style Cast Washers.

Size of Bolt, inches	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Malleable Iron Washers, ounces, each	$2\frac{1}{3}$	$3\frac{1}{3}$	$5\frac{1}{3}$	8	11	24	30
Cash Iron Washers, ounces, each	7	$10\frac{1}{2}$	16	24	32	72	92

Packed Loose.

JACK CHAINS.

Double Iron.



Per Dozen Yards
No. 10D—Gauge No. 8; Weight per package about
5 lbs. \$0.95



Per Dozen Yards
No. 15D—Gauge No. 13; Weight per package about
1 1/4 lbs. \$0.43



Per Dozen Yards
No. 18D—Gauge No. 17; Weight per package about
3/4 lb. \$0.33

Single Iron.



Per Dozen Yards
No. 12D—Gauge No. 11; Weight per package about
4 lbs. \$0.65



Per Dozen Yards
No. 16D—Gauge No. 15; Weight per package about
1 lb. \$0.33




Per Dozen Yards
No. 20D—Gauge No. 19; Weight per package about
1/2 lb. \$0.33


Twelve Yards in a Package.


Cuts Actual Size.


JACK CHAINS.

Iron and Brass.


	
No. 22—IRON; Gauge of Wire, No. 22; Weight per package about 1/4 lb.....	\$0.25
No. 22B—BRASS; Gauge of Wire, No. 22; Weight per package about 1/4 lb.....	.40


	
No. 18—IRON; Gauge of Wire, No. 18; Weight per package about 1/2 lb.....	\$0.28
No. 18B—BRASS; Gauge of Wire, No. 18; Weight per package about 1/2 lb.....	.60


	
No. 14—IRON; Gauge of Wire, No. 15; Weight per package about 1 1/4 lbs.....	\$0.40
No. 14B—BRASS; Gauge of Wire, No. 15; Weight per package about 2 lbs.....	1.35


	
No. 10—IRON; Gauge of Wire, No. 11; Weight per package about 4 lbs.....	\$0.80
No. 10B—BRASS; Gauge of Wire, No. 11; Weight per package about 4 1/4 lbs.....	3.50

Twelve Yards in a Package.
Cuts Full Size.

	
No. 20—IRON; Gauge of Wire, No. 20; Weight per package about 1/2 lb.....	\$0.26
No. 20B—BRASS; Gauge of Wire, No. 20; Weight per package about 1/2 lb.....	.50

	
No. 16—IRON; Gauge of Wire, No. 16; Weight per package about 1 lb.....	\$0.30
No. 16B—BRASS; Gauge of Wire, No. 16; Weight per package about 1 1/4 lbs.....	.86


	
No. 12—IRON; Gauge of Wire, No. 13; Weight per package about 2 1/4 lbs.....	\$0.44
No. 12B—BRASS; Gauge of Wire, No. 13; Weight per package about 2 1/2 lbs.....	2.06

	
No. 8—IRON; Gauge of Wire, No. 9.....	\$0.95
No. 8G—GALV. IRON; Gauge of Wire, No. 9...	1.60
No. 8B—BRASS; Gauge of Wire, No. 9.....	5.25

Weight per Package about 6 1/2 lbs.

SAFETY CHAINS.

Brass.

	
No. 3/0—Weight per package about 1/2 lb.....	\$1.15

	
No. 2/0—Weight per package about 3/4 lb.....	\$1.25

	
No. 0—Weight per package about 1 lb.....	\$1.50

	
No. 1—Weight per package about 1 1/2 lbs.....	\$1.85

	
No. 2—Weight per package about 1 3/4 lbs.....	\$2.30

	
No. 3—Weight per package about 2 1/2 lbs.....	\$3.15


Twelve Yards in a Package.
Cuts Full Size.

Nickel Plated.



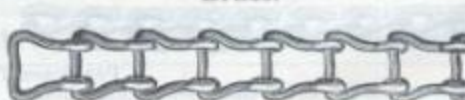
No. N/0

Brass Safety Chain.

	
No. N00—Weight per package about 3/4 lb.....	\$1.50
No. N0—Weight per package about 1 lb.....	1.75
No. N1—Weight per package about 1 1/4 lbs.....	2.10


LADDER CHAIN.

Brass.



No. L18

Brass Ladder Chain.

	
No. L17—Weight per package about 1 1/2 lbs.....	\$2.50
No. L18—Weight per package about 1 3/4 lbs.....	2.25
No. L19—Weight per package about 1 lb.....	2.00
No. L20—Weight per package about 3/4 lb.....	1.75

-2137-

COIL CHAINS.



Coil, Self Color, Welded and Proof Tested.

Standard.

Inches	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Number of Links to the foot...	13	12	10	9	9	9	6	5	4	4
Weight per 100 feet, lbs.	45	75	110	150	200	250	400	500	790	1000
Admiralty Proof Test Strain, lbs.	700	1200	2500	3500	4800	6200	9000	13800	18800	24600
Straight, per lb	\$									
± Twist, per lb	\$									

Coil, B. B. B. Special High Grade Iron.

B. B. B.

Inches	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Number of Links to the foot...	16	15	14	12	11	10	7 1/2	6 1/2	5 1/2	5
Weight per 100 feet, lbs.	45	75	110	150	200	250	400	500	790	1000
Admiralty Proof Test Strain, lbs.	900	1500	3200	4425	6100	7850	12150	17475	23780	31200
Straight, per lb	\$									
± Twist, per lb	\$									

1000 lbs. in a Cask.

Coil, Genuine Swedes or Norway Iron.

Norway.

Inches	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
Number of Links to the foot...	14	13	12	10 1/2	9 1/2	8 1/2	7	6	5 1/4	4 1/4
Weight per 100 feet, lbs.	45	75	110	150	200	250	400	500	790	1000
Admiralty Proof Test Strain, lbs.	900	1500	3200	4425	6100	7850	12150	17475	23780	31200
Straight, per lb	\$									

1000 lbs. in a Cask.

SAFE WORKING LOAD should be about one-half the above Proof Tests.

THE BREAKING STRAIN is about double the above Proof Tests.

Above scale is in conformity with the requirements of the United States and British Naval Departments.

To find the weight a chain will lift when Rigged as a tackle: Multiply the ordinary safe load, which is one-half of the proof test shown in table, by the number of Sheaves at the movable block and subtract one-quarter for resistance.

To find the size chain necessary to lift a given weight: Divide the weight to be lifted by the number of Sheaves at the movable block, and add one-third for friction, then find from the safe working load one-half of the proof test shown in table, the corresponding strain and size chain.

Estimated Weight Common Straight Link Coil Chain.

Size Chain, inch.	Weight.	Size Chain, inch.	Weight.	Size Chain, inch.	Weight.	Size Chain, inch.	Weight.
3/16	50	7/16	200	1 1/16	500	7/8	800
1/4	75	1/2	265	5/8	590	1 5/16	900
5/16	110	9/16	325	13/16	700	1	1000
3/8	155	5/8	420				

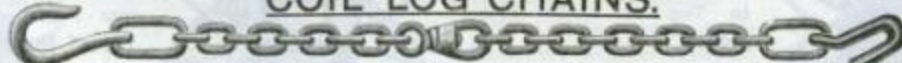
Example.

Take for example 3/4 inch Coil, Self-Color, Welded Chain. The test strain on this size is 1200 pounds; the safe load would be 1/2 of the test strain (or 600 pounds), which would be 600 pounds, and if movable block has two sheaves, multiply the ordinary safe load (which is 600 pounds) by 2 and take 1/4 of amount for resistance, which will give you 900 pounds weight of chain will lift.

To Find Size of Chain to Lift a Given Weight.

Take for example any article weighing 900 pounds to find size of chain necessary to lift this weight (900 lbs.), divide by the number of sheaves at the movable block, which is two sheaves, and add 1/3 of amount for friction which will give you 600 pounds weight to be lifted, which is 1/2 of the test strain, multiply 600 by 2 which will give you 1200 pounds test strain. Then if you will refer to your table you will find the test strain given is for 3/4 inch Chain.

COIL LOG CHAINS.



Wrought Iron, Self Color, Welded Links and Hooks, Common Malleable Iron Swivel.

STANDARD, COIL LOG or Binding CLOSE LINK, 1 Regular Large Hook and 1 Grab Hook.

Length, feet	10	12	14	16
± 1/4 inch. Per lb.	\$			
5/16 inch. Per lb.	\$			
3/8 inch. Per lb.	\$			
± 1/2 inch. Per lb.	\$			

Weight each about, 1/4 inch, 10 ft., 8 lbs.; 3/8 inch, 16 ft., 14 lbs.; 5/16 inch, 10 ft., 12 lbs.; 5/16 inch, 16 ft., 19 lbs.; 3/4 inch, 12 ft., 20 lbs.; 3/4 inch, 14 ft., 27 lbs.; 1/2 inch, 10 ft., 30 lbs.; 1/2 inch, 16 ft., 48 lbs.

1000 lbs. in a Cask.

TRADE MARK:
"LIBERTY"
REGISTERED.

-2354C-

LANTERNS.

LIBERTY® RAILROAD.

All Liberty Railroad Lanterns Have Wicks Fitted to Burners, Ready for Use.



All Liberty Railroad Lanterns are made of Heavy Tin and Heavy Steel Wire; the Tops are Drawn from One Piece of Material and are Without Seams.

The Frames, after being Set up and Soldered, are Submerged in a Vat of Hot Black Tin; This Process Double Solders every connection and gives a Fine Bright Finish as well as making them Rust-proof.

The Wind Guard is held in place with a Heavy Coil Spring which allows the Collar to fit perfectly the Top of the Globe regardless of whether the Globe is of exactly the right length or not.

All Lanterns on this page are furnished with our Regular No. 39 Globes.



Double Wire Guards; Tin Bottom; Seamless Bottom Oil Cup, held in place by a simple and most secure Brass Side Spring Fastening; Removed by pressing Spring outward and turning Oil Cup half-way around; Inside Wick Raiser; Diameter of Bottom 6½ inches; Height to Top of Dome 10½ inches.



Double Wire Guards; Wire Bottom; Seamless Bottom Oil Cup, held in place by a simple and most secure Brass Side Spring Fastening; Removed by pressing Spring outward and turning Oil Cup Half-way around; Inside Wick Raiser; Diameter of Bottom 7½ inches; Height to Top of Dome 10½ inches.

	Per Dozen
No. 1R1—With No. 1 Burner (uses No. 1 Flat Wick)	\$10.50
No. 1R2—With No. 2 Burner (uses No. 2 Flat Wick)	11.00

	Per Dozen
No. 2R1—With No. 1 Burner (uses No. 1 Flat Wick)	\$11.00
No. 2R2—With No. 2 Burner (uses No. 2 Flat Wick)	11.50



Double Wire Guards; Wire Bottom; Seamless Bottom Oil Cup; Special Friction Oil Cup Holder; Oil Cup removed through Top from Inside; Outside Wick Raiser; Diameter of Bottom 7½ inches; Height to Top of Dome 10½ inches.



Six Flat Steel Perpendicular and Double Wire Horizontal Guards; Wire Bottom; Seamless Bottom Oil Cup; Special Friction Oil Cup Holder; Oil Cup removed through Top from Inside; Outside Wick Raiser; Diameter of Bottom 7 inches; Height to Top of Dome 10½ inches.

	Per Dozen
No. 3R1—With No. 1 Burner (uses No. 1 Flat Wick)	\$11.50
No. 3R2—With No. 2 Burner (uses No. 2 Flat Wick)	12.00

	Per Dozen
No. 4R1—With No. 1 Burner (uses No. 1 Flat Wick)	\$15.00
No. 4R2—With No. 2 Burner (uses No. 2 Flat Wick)	15.50

Oil Pot Capacity ½ Pint. Lard Oil Ratchet Burners used on all.
One-half or One Dozen in a Case; Weight per Dozen about 45 lbs.

TRADE MARK:
"LIBERTY,"
REGISTERED.

-2355-

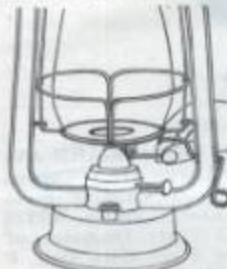
LANTERNS.

LIBERTY*, TUBULAR.

LIBERTY* Lanterns are made in a factory equipped with the Latest and Best Machinery for Lantern Manufacturing Purposes, and by a Manufacturer of Long Experience. Owing to the Large Quantity of goods of this class that we sell, we are enabled to take the Entire Product of this Large Factory. The selling expense, so far as the manufacturer is concerned, is entirely done away with, as all his goods are shipped and billed to us as fast as they are finished. We are thus enabled to purchase them at a very small percentage above the manufacturing cost, which allows us to place before you a line of Lanterns of the Highest Possible Grade at the Right Price.

They are made throughout from the Best Materials obtainable and contain many Desirable Features impossible to get in other makes, many of which are patented.

The Light Giving Qualities of Liberty Lanterns are unsurpassed. They are so constructed that Air is supplied in sufficient quantity to the Burners to cause Perfect Combustion, consequently a CLEAR WHITE LIGHT is obtained.



Showing Lifting Device
on Regular Tubular
Lanterns.

One of the most Important Features of a Lantern is the Globe Lifting Device. Owing to the fact that the Globe is lifted every time the Lantern is lighted, it is necessary to have a very Substantial Arrangement in order to do the work required of it in a Satisfactory Manner. Our "Hold Fast" Lifting Device, used on Liberty Lanterns, is Simple and Positive; there is nothing to get out of order and will always do the work required Quickly and Accurately.

On the Regular Tubular Styles the Lever is held in an Upward or Downward Position by a Flat Steel Spring placed in the Side Tube, through which the Lever passes.

The action of the Cold Blast is the same as above, except that the Spring is in the Canopy and the Lifting Lever is held in its Downward Position by coming in contact with the Brass Lug shown in cut on outside of the Tube.



Showing Lifting Device
on Cold Blast
Lanterns.

ALL LIBERTY LANTERNS HAVE WICKS FITTED TO BURNERS, READY FOR USE.

The Device for Holding the Handle or Bail in Position on Liberty Cold Blast Lanterns is Patented, and is used only on our line. By its use the Handle is Held in any Desired Position, as shown in the accompanying Illustration.

All Liberty Cold Blast Lanterns have a Double Bayonet Lock (as shown in the Illustration), which Prevents the Burner from coming off accidentally. Used only on Liberty Lanterns.



Showing Double Bayonet
Burner Lock.



Showing Device for Holding
Handle in any Desired
Position on Cold
Blast Lanterns.



Showing Extension Bottom used on all Cold Blast Lanterns.

The Bottoms of all Liberty Lanterns are very Large in Diameter and are NOT EASILY TIPPED OVER. The Founts on the Cold Blast have Extension Bottoms of Extra Heavy Material and are of Large Capacity.



Showing Canopy Lifted
for Easily Removing
the Globe on Cold
Blast Lanterns.

The Canopy on the Cold Blast Styles is Held in Place by a Heavy Steel Wire Spring, Coiled between the Lower Extension of Canopy and the Outside Top Casing. This Method of Construction Protects the Spring from the Excessive Heat and also serves to Hold the Lower Section of Canopy firmly against the Globe.

The Globes used on all Liberty Lanterns, Regular Tubular and Cold Blast Styles are made from the Best Quality of Lead Flint Glass. They are Strong, White and Very Clear. They ARE NOT EASILY BROKEN, owing to the Large Quantity of Lead they contain. The Edges are Carefully Ground and they fit perfectly.



Showing Liberty
Globe used on all
Liberty Cold Blast
Lanterns.

OUR GUARANTEE.

All **LIBERTY*** Lanterns are Air Tested and we Guarantee them to be AIR TIGHT and OIL TIGHT, and if found otherwise we will cheerfully Replace them at our Expense.

TRADE MARK:
"LIBERTY"
REGISTERED.

MT



LANTERNS.

LIBERTY®, TUBULAR.

For Kerosene.

WICKS FITTED TO BURNERS,
READY FOR USE.

Holds Sufficient Oil to Burn 22
to 25 Hours.

Can be Filled, Lighted and
Regulated without Removing
Globe.



HOT BLAST.

Heavy Tin, Bright; Large Oval Tubes; OUR
HOLDFAST SIDE LIFT; No. 1 Steel Tubular Burner,
with $\frac{5}{8}$ inch Wick; No. 0 Liberty Globe; Oil Pot Capa-
city 1 Pint; Diameter of Base 6 inches; 10 Gauge
Polished Steel Wire Ball, 6 inches in Diameter; Height,
with Ball Down, 14 inches.

Per Dozen

No. 505/0—Weight per dozen about 35 lbs. \$9.50

One Dozen in a Case.

HOT BLAST DASH.

Heavy Tin, BLUE JAPANNED; DASH BOARD AT-
TACHMENT AND REFLECTOR; Large Oval Tubes;
OUR HOLDFAST SIDE LIFT; No. 1 Tubular Steel
Burner, with $\frac{5}{8}$ inch Wick; No. 0 Liberty Globe, WITH
BULL'S EYE; Oil Pot Capacity 1 Pint; Diameter of
Base 6 inches; 10 Gauge Polished Steel Wire Ball, 6
inches in Diameter; Height, with Ball Down 14 inches.

Per Dozen

No. 520/0D—Weight per dozen about 37 lbs. \$13.00

No. 520/0DR—Same as No. 520/0D, except Fin-
ished in a Beautiful Shade of Ma-
roon, Baked on at a High Degree of Heat and
will not Crack either from Heat or Cold. 15.00

One-half Dozen in a Case.



Double Bayonet Locked Burners.

Holds Sufficient Oil to Burn
20 to 23 Hours.

Can be Filled, Lighted and
Regulated without Removing
Globe.

COLD BLAST.

Heavy Tin, Bright; Large Oval Tubes; OUR HOLDFAST
SIDE LIFT; No. 2 Cold Blast Tubular Brass
Burner, with 1 inch Wick; No. 0CB Liberty Cold Blast
Globe; Oil Pot Capacity $1\frac{1}{4}$ Pints; Diameter of Base
7 inches; 10 Gauge Polished Steel Wire Ball, 6 inches
in Diameter; Height, with Ball Down, $15\frac{1}{4}$ inches.

Per Dozen

No. 550/2—Weight per dozen about 47 lbs. \$16.00

No. 553/2—Same as No. 550/2, except with En-
ameled Frame and Nickel Plated Trim-
mings; The Top Frame, Side Tubes and Fount
are Enameled in a BEAUTIFUL SHADE OF
MAROON, Baked on at a High Degree of Heat
and will not Crack either from Heat or Cold;
The Patent Ball, Canopy, Canopy Top, Globe
Guard, Globe Lifting Lever and Burner Plate
are Nickel Plated over a First Coat of Copper
and Highly Polished 21.00

One-half Dozen in a Case.



COLD BLAST.

Heavy Tin, OXIDIZED OLD COPPER, Polished;
Large Oval Tubes; OUR HOLDFAST SIDE LIFT; No. 2
Cold Blast Tubular Brass Burner, with 1 inch Wick; No.
0CB Liberty Cold Blast Globe; Oil Pot Capacity $1\frac{1}{4}$
Pints; Diameter of Base 7 inches; 10 Gauge Polished
Steel Wire Ball, 6 inches in Diameter; Height, with Ball
Down, $15\frac{1}{4}$ inches.

Per Dozen

No. 575/2—Weight per dozen about 47 lbs. \$36.00

TRADE MARK:
"KOO-CHOOK,"
"DOLPHIN" and "FAMOUS,"
REGISTERED.

-1024-

RUBBER HOSE.



Highest Grade Para Rubber Compound Cover and Seamless Inner Tube, with Extra Heavy High Grade Cotton Duck Plies; Frictioned with a Very Fine Quality Para Rubber Compound which Holds the Plies Securely Together; Especially Designed for Railroad Purposes. Sold under a guarantee to withstand Regular Water Pressure anywhere in the United States, and to give absolute Satisfaction.

KOO-CHOOK*, Black, 3-Ply.

Inside Diameter, inches.....	$\frac{1}{2}$	$\frac{3}{4}$
Weight 50 feet about, lbs.....	12	18
Number feet in Bale.....	500	500
Per foot	\$0.25	.30

Seamless Inner Tubes, will not Crack or Open, thus keeping the Duck from coming in contact with the Water and Preserving the Hose.

Tested to a Pressure of 600 lbs. to the Square Inch.

**KOO-CHOOK*, Black, 4-Ply.**

Inside Diameter, inches.....	$\frac{1}{2}$	$\frac{3}{4}$
Weight 50 feet about, lbs.....	14	20
Number feet in Bale.....	500	500
Per foot	\$0.30	.37

To Preserve Hose, Keep in a Cool, Dry Place; Do not Kink; Do not Drag over Rough Surfaces; Drain off all Water before Reeling.

The Average Water Works Pressure is 100 to 150 lbs.

Special Grade Para Rubber Compound Cover and Seamless Tube, with Heavy High Grade Cotton Duck Plies.

DOLPHIN*, 5 Ply; Red.

Inside Diameter, inches.....	$\frac{1}{2}$	$\frac{3}{4}$
Weight 50 feet about, lbs.....	13	16
Number feet in Bale	500	500
Per foot	\$0.37	.46

±DOLPHIN*, 5 Ply; Red, Wire Wound.

Inside Diameter, inches	$\pm\frac{1}{2}$	$\pm\frac{3}{4}$
Weight 50 feet about, lbs.	19	22
Number feet in Bale	500	500
Per foot	\$0.38	.47

DOLPHIN*, 5 Ply; Black.

Inside Diameter, inches.....	$\frac{1}{2}$	$\frac{3}{4}$
Weight 50 feet about, lbs.....	13	16
Number feet in Bale	500	500
Per foot	\$0.36	.45

±DOLPHIN*, 5 Ply; Black, Wire Wound.

Inside Diameter, inches	$\pm\frac{1}{2}$	$\pm\frac{3}{4}$
Weight 50 feet about, lbs.	19	22
Number feet in Bale	500	500
Per foot	\$0.37	.46

Sold Only in 25 and 50 foot Lengths.

**FAMOUS*, 4 Ply.**

Second Grade Black Rubber Cover and Seamless Tube, Extra Heavy Duck Plies, Standard Grade.

Inside Diameter, inches	$\frac{1}{4}$	$\frac{1}{2}$
Weight 50 feet about, lbs.	30	36
Number feet in a Bale	250	150
Per foot	\$0.62	.75

FAMOUS*, 5 Ply.

Second Grade Black Rubber Cover and Seamless Tube, Good Grade Cotton Duck Plies.

Inside Diameter, inches	$\frac{1}{2}$	$\frac{3}{4}$	1
Weight 50 feet about, lbs.	11	15	20
Number feet in a Bale	500	500	500
Per foot	\$0.37	.46	.62

Sold Only in 25 and 50 foot Lengths.

NOTE—We do not recommend the Famous Hose.

All $\frac{1}{2}$ and $\frac{3}{4}$ inch Hose, Shipped from Stock, Furnished with Nickel Plated Couplings and Bands (Not Clamps), in 50 foot Lengths; An Extra Charge is made for Couplings when sold in 25 foot Lengths.

**FAMOUS*.**

Medium Grade Black Rubber Cover and Seamless Tube, with Medium Weight Cotton Duck Plies; Wound with 13 Gauge Galvanized Steel Wire; Wire Winding Protects the Exterior of Hose; Cannot Kink; Will Withstand Greater Pressure.

FAMOUS*, 5 Ply Wire Wound.

Inside Diameter, inches.....	$\frac{1}{2}$	$\frac{3}{4}$	1
Weight 50 feet about, lbs.....	17	21	28
Number feet in a Bale.....	500	500	250
Per foot	\$0.37	.46	.62

STENOGRAPHERS' CHAIRS.STOOLS.

Quarter Sawed Oak; Upholstered in Genuine Leather; Patent Adjustable Iron in Base; Adjustable Back; Height of Back above Seat 21 inches; Diameter of Seat 16 1/2 inches.

Per Dozen

No. GS-XU—Golden Oak, Polished Finish.....\$110.00

No. WS-XU—Weathered Finish.....110.00

No. ES-XU—Early English Finish.....110.00

Shipped Knocked Down; Weight per Dozen about 265 lbs.



Metal Base, Black Japan; Revolving Oak Top; Diameter of Seat 12 inches.

Per Dozen

No. 267-RX—Height over all 21 inches.....\$39.00
Weight per Dozen about 290 lbs.

No. 268-RX—Height over all 25 inches.....36.00
Weight per Dozen about 225 lbs.
Shipped Knocked Down.

STOOLS.

Rock Elm; Golden Finish; Diameter of Seat 14 inches.

Per Dozen

No. 45-14—Height over all 18 inches.....\$13.00
Weight per Dozen about 100 lbs.

No. 46-14—Height over all 24 inches.....15.50
Weight per Dozen about 110 lbs.

No. 47-14—Height over all 30 inches.....19.00
Weight per Dozen about 120 lbs.
Shipped Set Up.



Elm; Screw Revolving Top; Height 30 inches.

Per Dozen

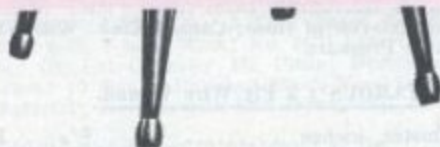
No. 6975-14—Golden Oak, Gloss Finish.....\$42.00

Shipped Knocked Down; Weight per Dozen about 200 lbs.

Wrapped in Excelsior and Heavy Paper.

STENOGRAPHERS' CHAIRS.STOOLS.EXHIBIT SHOWN ON OPPOSITE PAGE.

- ¶ The most complete and extensive piece of mechanism of its kind ever constructed.
- ¶ Hardware display of the Simmons Hardware Co., at the Louisiana Purchase Exposition in St. Louis in 1904 and for which we were awarded the First Grand Prize (the only one of its kind).
- ¶ Made entirely of hardware and Tools—one item alone, that of 5,000 Axes will tell something of its proportions, and in all there were 12,407 pieces of hardware used in its construction.
- ¶ The revolving Wind Mill—Chain River with its Auger Bit Falls, also the largest Pocket Knife and Scissors ever manufactured were continually in motion and attracted more universal attention than any other Exhibit at the Exposition.



Rock Elm; Golden Finish; Diameter of Seat 14 inches.

No. 45-14—Height over all 18 inches.....\$13.00

Weight per Dozen about 100 lbs.

No. 46-14—Height over all 24 inches..... 15.50

Weight per Dozen about 110 lbs.

No. 47-14—Height over all 30 inches..... 19.00

Weight per Dozen about 120 lbs.

Shipped Set Up.

Wrapped in Excelsior and Heavy Paper.



Elm; Screw Revolving Top; Height 30 inches.

Per Dozen

No. 6975-14—Golden Oak, Gloss Finish.....\$42.00

Shipped Knocked Down; Weight per Dozen about 200 lbs.



